ESTABLISHED 1848

COLMAN'S RURAL WORLD.

DEVOTED TO AGRICULTURE, HORTICULTURE, HORSES, CATTLE, SHEEP, SWINE, ETC.

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COLMAN'S RURAL WORLD.

NORMAN J. COLMAN, LEVI CHUBBUCK, } EDITORS.

Published every Wednesday, in Chemical building, corner of Eighth and Olive streets, St. Louis, Mo., at one dollar per year. Eastern office, Chalmer D. Colman, 520 Temple Court, New York City. Advertisers will find the RURAL WORLD the best advertising medium of its class in the United States. Address all letters to COLMAN'S RURAL WORLD, Chemical Building, St. Louis, Mo.

To double the circulation of the RURAL WORLD annually is an ambition of the Publishers. It requires new subscribers to do this, and in order to secure them, every present subscriber is constituted an agent to assist in that effort. The price of the RURAL WORLD is one dollar per year, which is cheap, considering the quantity and quality of the matter and paper used, but to accomplish our purpose we will allow every subscriber to send a new name with his own for one dollar, and he may add additional NEW names at fifty cents each, which is less than the actual cost of the paper. Renewals in no case will be received for less than one dollar unless accompanied by the name of a new subscriber.

The Great St. Louis Fair next week, Oct. 7-12.

If a quantity of dust has not been stored for use about the barn and in the poultry house this coming winter, do not neglect securing a supply any longer. When dust is a nuisance as it has been for so long, it may take will power and business judgment to collect and store it, but by doing so one can convert a portion of the nuisance to most profitable uses. A supply of dust will aid in keeping the barn in healthful condition during the winter months, and the poultry free from vermin. It has a value in the earth closet that has never been fully realized by farmers and their families. If it cost more than time and labor a higher estimate would be put on it. There are large values that are not money values, and when these are fully appreciated and used they mean money to the user.

The United States Government has spent half a million of dollars on a complete exhibit at the Pan-American Exposition. If the grounds contained no other attraction the government exhibit alone is well worth a journey to see. With cheap railway fares and a paltry 50 cents admission to the grounds, the educational value alone is worth many times the cost of the trip in money, time or exertion. The government exhibit is thoroughly appreciated by those who see it, but millions of others should immediately avail themselves of the opportunity. It is impossible to conceive of any other adequate means whereby the average citizen could see and realize the splendid government under which we live and enjoy so many privileges as this Pan-American Government exhibit.

JUDGE MILLER.

We feel assured that thousands of our readers have missed Judge Miller's "Horticultural Talks," and have queried as to why they are not forthcoming. It is years since these practical and helpful "Talks" have not appeared in so many consecutive issues. They are missed by the RURAL WORLD editorial force. We regret to have to state that this dear old friend is still ill. In a recent note received at this office, dictated by the Judge himself, he says: "I'm just on the 'Brink' and know not how it will end." His daughter reports that at times he is a great sufferer. The readers will all sympathise with Judge Miller and his family, and trust if it be the Divine will that he will be permitted to continue still longer his labor of love in horticultural work, helping thousands by his words of cheer and horticultural wisdom gathered from years of active work.

PERMANENT HOMES.

A friend who had just returned from the old home in the East, which was left nearly 35 years ago to try making a home and fortune in the West, related some facts that have been the subject of much thought. This eastern home is in a rural district. One pleasing feature of the visit was that so many of the homes of the long ago were still there, and occupied by the old friends or some of their children. This fact made every individual met of personal interest. His or her hand was shaken, if it were that of a young man or woman, for the sake of parents who were friends of the long ago. Many of the old houses built by the grand, possibly the great grand parents of the present generation, were kept intact, just for the sake of old memories.

We could not help thinking how far and wide have been scattered the families that began life together less than threescore years ago in a prairie section of this state. There is but one family left of those who settled there in the early seventies; and this section, though containing some of the best farm land in the state, is not having the farm improvements that the intelligence and thrift of these old settlers would warrant. The why has oft been a source of inquiry.

If permanent homes had been the purcare of the fruit trees. Would not more intelligent planting of shade trees have pose would there not have been more been exercised? Then, too, greater varieties of fruits would have been set out. Fencing and farm buildings would have been erected that would be more lasting.

Parents frequently labor to get more land, more stock and a bank account to bequeath their children. These children in many instances leave the farm home when these bequests are theirs, and the names of grand parents are to great-grandchildren stranger names.

Here in the West we seem to breathe in the air "Go West," and thus develop a restless, roving spirit.

The home that passes through successive generations awakens pride, and then it receives the labors of each generation, and such a farm is better than a bank account to leave to the children. By its history they are taught what it means to build a home. They are taught to reverence a home. The old trees have a lesson of industry to teach. If they had not been planted by other hands long since folded in death, this generation could not enjoy their shade. If farmers would instill in children the idea of a family home much greater interest would result in farm life and more permanent improvements would be made. It is a great thing to build a good farm home

THAT "BLESSING IN DISGUISE."

Editor RURAL WORLD: What Mr. Jackson says in the RURAL WORLD, Aug. 21, about the drouth being "a blessing in disguise" is "true as holy writ." So says C. D. Lyon in RURAL WORLD Sept. 11. This sentiment has been expressed in the RURAL WORLD several times lately. Is the statement correct? Let us see.

Blessing is defined by the Standard Dictionary as follows: "That which makes happy or prosperous; any temporal or spiritual gift calling for gratitude; especially a divine favor; a mercy."

In the light of this definition I wish to test that statement. If a drouth is a blessing it follows that the worse the drouth the greater the blessing. I believe that I am qualified to speak on this subject, for I have passed through three of these "blessings in disguise" in the last ten years, two in western Kansas and the present one in Missouri.

I went to Norton Co., Kan., in the winter of 1891 and 1892, and bought a well improved farm. In 1893 I had less than half a crop of corn, but wheat, rye, potatoes, oats, and all kinds of vegetables were a complete failure. I suppose that if Mr. Lyon had been there he would have said, "It is a blessing, Mr. Calhoun, a blessing in disguise." In 1894, which was the worst year western Kansas has had since it was settled by the whites, there was nothing raised.

Wheat and oats did not head, and much of the corn did not get high encugh to be seen above the ridges which the lister made when it was planted. Hogs were sold at a sacrifice and we sent our cattle and horses south, where they were herded on the dry buffalo grass. According to the theory of Mr. Lyon, it was only another "blessing in disguise."

I sold my farm for $400, less than the cost of the improvements, the labor not included, and came here for the same reason the young man who had gone to three different places, on Sunday evening, to see a girl, and found another fellow ahead of him at each place. He went to church. The minister called upon him to lead in prayer and he began by saying: "Oh, Lord, thou knowest that I am here because there was no other place for me to go."

On account of the "blessings" one of which was comparatively small, the other very great, which I had enjoyed in Kansas, I was so nearly ruined financially that there was no place for me to go and get enough land to make a farm, except to "Poor old Missouri." That, of course, was only "a blessing in disguise."

Here I bought a farm, a part of which was in cultivation, the remainder covered with heavy timber. On this I paid what money I could and went in debt to such an extent that the wise ones said "he will never get out; he will lose it all." That debt was another "blessing in disguise," to be sure, for it was one result of the "blessings" through which I was given "Eyes the good to see in all things save sin."

The truth is the drouth is a calamity without any tendency to make men frugal continuously. Mr. Jackson says the drouth of 1881 made him frugal. Grant it. What then? He is a man of a thousand. He was benefited while the 999 were made to suffer in order that he might be taught frugality. Call you that a blessing? A. CALHOUN.

St. Clair Co., Mo.

VERNON CO. (MO.) NOTES.

Editor RURAL WORLD: About all the corn has been cut. Pastures are good and getting better. Stock water is plentiful, and we feel more like living than we did in July. Apples are falling badly, but there will be enough for home supply. The peach crop was better than expected and brought prices all the way from 25c to 75c per bushel. Sweet potatoes that were kept free of weeds and cultivated are making a good yield. We mulched our late Irish potatoes with old hay, coarse manure, etc., and they are now making a fine growth, are in bloom, and if we do not have an early freeze will have some Murphies yet. C. A. BIRD.

PRICKLY PEAR NOTES.

Post-Frosteriorly.

Editor RURAL WORLD:

Yes, we had a little straight-edged shower, two or three of 'em, in fact; but that was so long ago!

Turnip seed sowed August 20 has materialised about a dozen or so measly looking little pale-faced plants, and now frost has come down like a wolf on the fold, and the woodland is gleaming in purple and gold.

Some local spots have had more showers than we, some less; but, taken altogether, this is certainly well within the dry belt. Mighty clouds with deep muttering thunder rise, only to fall again into the low, sweet cadence of a summer breeze; while the weary water-hauler, in which class may be numbered three out of every five heads of families, goeth his way to the gum log at the spring in the middle of the road at the creek.

The creek averages about two miles away; round trips twice a day, result in eight miles of travel daily. Repeated 30 times every month, with the drouth already four months, and you can have some idea of the disadvantage of living in a "dry and thirsty land where no water is."

Most of the corn is cut and will make fairly good fodder. Mast is not plentiful and hogs will be sold short, likewise cattle. Many have been feeding stock for some time past, so that, verily happy is that man who hath little live stock in the stall. One of our county merchants who a year ago was holding his stock as a first class proposition, said not long ago that he wishes he could find some one who would buy his stock, as the coming year would be very close financially.

However, as each cloud has a silver lining, so here we have had a bountiful wheat crop and now a good peach crop, insuring bread and stewed peaches all winter. Where the peaches secured their necessary moisture is a mystery, but we have the nicest, richest, smoothest fruit since we settled here, five years since.

A couple of bushels of wild grapes made a luxurious addition to the winter stores. Part of the juice cooked with red cling peaches and made into butter made the richest combination we have found, no water being needed to cook it down; just pure grape juice and peaches. The resulting product needs labeling, as the uninitiated would never guess as to the composition. For more than a month we have been sated with peaches in all styles save the usually accepted one—peaches and cream, as our milk-cow, owing to the extraordinary lack of humidity in nature this summer, early became discouraged, in spite of extra care, and left us desolate and milkless. Owing to her previous good behavior we bore the loss as philosophically as possible, while hoping for wetter times.

It seems as though the President's taking-off would lead to better laws and their enforcement in regard to anarchists and general violence in all parts of the country. Stringent measures are certainly needed, and riot and bloodshed were so common that it seemed as though nothing less than some appalling catastrophe would arouse the people to a sense of duty toward lawlessness. Let us hope the lesson will not be soon forgotten, and that our beloved country may become in a fuller and better sense than ever before "the land of the free and the home of the brave," while forever shutting without her gates those whose only idea of independence is the power of destroying that which better men have builded.

It certainly behooves every individual in all the land to use his or her personal influence toward the upbuilding of a high moral sentiment in every station of life, that the nation may grow stronger in righteousness and freedom and achieve that mighty destiny toward which this Queen of Republics is bound.

We have not been at the rain-bow city but from some of the reports of those who have "seen it all" we content ourselves with the pleasing thought that our own St. Louis will carry away the international medal as compared to any other exposition, from the year one. Being centrally located, she will present the best opportunity to show to the world the South and its advantages as well as the other sections, and should be an immense advantage commercially and educationally (and may we say morally by having closed Sabbaths, and less questionable Midway attractions) to the whole Central Mississippi Valley.

Yes, we look for great things at St. Louis in 1903, and intend giving it our personal support! 'Course it'll go!

RALPH T. HOYT.

Oregon Co., Mo.

THE FALL ARMY WORM.

Editor RURAL WORLD: I am sending you under another cover a few worms which some think are army worms; others say it is too late for the army worm. These were in a wheat field that has been plowed and is being reseeded to wheat. The worms are eating the volunteer wheat and crab grass. I would like to know what the worms are, and if, in your opinion, they will destroy the young wheat when it comes up. We had the ground almost all seeded before we noticed the worms.

Pulaski Co., Ill. M. H. BAGBY.

Miss Murtfeldt has examined the worms and reports as follows:

The larvae submitted to me from your correspondent, Mr. M. H. Bagby, are not the true army worm, but are a kindred species, known as the Fall Army Worm (Laphrygma frugiperda), an insect which not infrequently attracts attention at this season of the year. While this worm is a very general feeder it seems to prefer grain and grass when these are attainable, and is often found in great numbers on early sown wheat and rye. There is, however, no danger from it for grain sown at the present date, as the present brood of larvae is the last of the two or three annual broods and will soon enter the ground for transformation and remain there, in the pupa state, until spring. Should the fall not prove too dry any fields of grain that have already been damaged will no doubt recover.

MARY E. MURTFELDT.

Kirkwood, Mo.

PULVERIZED GYPSUM.

Although there has as yet developed little need for soil fertilizers in the Central West, their application, sooner or later, likely will be a necessity for obtaining satisfactory results, as has been the experience in the older agricultural states.

Pulverized gypsum is recognized the world over as having extraordinary merit as a soil fertilizer. Kansas especially has vast deposits of gypsum, having marketed a quantity last year larger than any other state, save Michigan; hence, its proximity alone to the agricultural lands of the Middle West will in time make it especially valuable to that region, not to mention the profit derived from its sale as a commercial commodity. For these and other reasons the paper read before the annual meeting of the Kansas Board of Agriculture by Prof. Erasmus Haworth, of the State University, upon invitation of Secretary F. D. Coburn, on "Kansas Gypsum and its Value as a Fertilizer," excerpts from which are given, is timely and suggestive.

Pulverized gypsum has been used as a soil fertilizer for more than 2000 years. It is established beyond a doubt that for certain kinds of soil all over the world land plaster, or gypsum, is an exceedingly valuable fertilizer. It is used most extensively in old countries where fertilizers of all kinds are most in demand. It constitutes one of the main materials for enriching the soil today throughout Canada, New England and the central and southern Atlantic states, and its extensive application is gradually moving westward. It appears to be the most valuable as a fertilizer for grasses and leguminous plants, although there is an abundance of proof that for some soils it is equally valuable for corn, wheat and other cereals. Its use in Kansas is almost entirely unknown, although the state possesses such large quantities of it.

Gypsum is considered an indirect fertilizer; that is, it is not taken up directly by plants to any considerable degree, but when placed in the soil it assists in providing other plant foods. If something can be added to the soil which does not have a deleterious effect and which will intensify the chemical disintegration, it corresponds in every respect to returning back to the soil the ash of the plants previously grown, because it renders available for immediate use a large amount of soluble soil constituents. It is now pretty generally admitted that gypsum serves this important purpose.

Kansas gypsum is one of two distinct varieties, which differ from each other in origin and in methods of manufacture. The most abundant variety is the ordinary rock gypsum, which exists in broad layers interstratified with limestone and shales, so that in every respect it is a genuine rock. It is exceedingly pure, frequently yielding by analysis no more than one or two per cent of impurities, and is the equal of any gypsum in the world for the manufacture of the highest grades of plaster of Paris and, when properly mixed with efficient retarders, makes as high grade gypsum cement plaster as can be found in the markets of Europe or America. Another variety of gypsum is known in Kansas and elsewhere, which is of a pulverulent form. It is found at or near the surface of the ground, generally in wet or marshy places, and is more or less mixed with earthy matter, such as soil, clay, sand, etc., and has been known in Europe for more than a hundred years as gypsum earth. Dust blown by the winds and the small amount of material carried down by drainage mixed through the beds produce the impurities referred to, which has been found serves as a natural retarder when the material is calcined into plaster, producing one of the best cement plasters ever known. It is counted a little better for plastering walls than the ordinary plasters made from the rock gypsum, the reason being that the impurities present in kind and amount happen to be just right for retarding the setting process sufficient to allow the workman to trowel the mortar down to whatever form he desires.

Land plaster, as used thus far, has generally been made from the rock gypsum by grinding to a coarse powder. It is believed that the gypsum earth, when not too badly mixed with clay and soil, will make just as good a fertilizer as the ground rock gypsum. The only objection to the presence of these impurities is that they act as a dilutant. The gypsum earth, therefore, is already pulverized and in an excellent state of preparation for applying immediately to the soil in the same manner that ground rock gypsum is supplied.

VIEW ON ENTERING GROUNDS—GRAND AVENUE ENTRANCE, ST. LOUIS FAIR.

BALANCED RATIONS FOR PLANTS.

Excess in Nitrogen, Etc.

Editor RURAL WORLD: Under the heading of "Something About Manure," Hoard's Dairyman has this to say: "The soil of this county is largely a compound of glacial-drift. Naturally it is not as fertile as many other portions of the state. So to start with, about every farmer stood nearly equal with his neighbor, in the natural fertility of his soil. From 1840 to 1870 the main production of the county was wheat. The methods of farming were stupidly wasteful, and they soon brought the land to a low production of nearly all crops.

"The change from wheat to butter-farming has produced a wonderful increase in fertility, so that to-day splendid crops of grain, corn and grass are grown. For every ton of wheat the farmers sold, they took out of the soil $7 worth of fertilizer. For every ton of butter sold only 50 cents worth of fertility is disposed of. Such a change of policy, such a difference in the effect on the soil of two methods of farming, must in the very nature of things show for itself.

"The effect on different farms is, as we said at the beginning, very instructive. On hundreds of farms that we know of it is becoming a matter of some difficulty to gr w oats on account of the falling down, or 'lodging,' as it is commonly called, of the grain before it is fit to cut. This effect is due to the large per cent of nitrogen in the soil and is especially noticeable on the farms whose owners have been large buyers of bran and gluten for years past. Carrying a large stock of cows, young cattle and hogs, and buying bran has done this work. Not only has this policy made the farms rich, but it has made the farmers rich.

"What our lands need now is potash and phosphoric acid, and our farmers would do well to give larger study to the use of mineral fertilizers. We doubt if a thousand dollars' worth of commercial fertilizers has ever been used by the farmers of Jefferson County. Cows, young stock, clover and stable manure have done the work."

We have quoted thus largely from the worthy editor of a most excellent paper, for the reason that the experience of the farmers of Jefferson County, Wisconsin, in the altogether too exclusive reliance upon, and the use of, stable manure, is also the experience of every other farmer, who has had any experience, in every county throughout this broad land. It is no cause for congratulation, at this day and time, that a county has "never spent a thousand dollars for commercial fertilizers," for the reason that best results can never be obtained by the use of stable manure alone. Stable manure is an unbalanced fertilizer, a one-sided fertilizer; and improperly balanced ond one-sided fertilization never did and never will bring about the beneficial and profitable results that have been and are obtained where an equilibrium of all the elements of fertility is obtained and maintained. There is much more, when it comes to obtaining largest possible yields per acre, in obtaining and maintaining a proper balance between the nitrogen, the potash, the phosphoric acid, the lime and the humus, than would appear on the surface to a casual observer.

Important, essential, and, in fact, indispensable as nitrogen is to the well-being of any and all of the cultivated crops, an excess of it is most positively injurious to the major portion of them; we might say all of them, with the exception of the leafy-growth crops, as cabbage, lettuce, spinach, kale, etc. Nitrogen promotes leaf growth, stalk growth, vine growth or woody growth. This excessive growth never fails to be at the expense of the fruitage of the plant, as for instance, wheat, oats, barley, or rye with a preponderance of straw, but with heads so diminutive and so ill-filled as to be altogether out of proportion; also tubers, leading some of our moon-struck friends to imagine they were "planted on the wrong side of the moon"; fruit trees of all kinds in the orchard, making woody growth when they should have been putting on and maturing a heavy crop of fruit, the trees making a magnificent growth of wood, but little if any fruit, and the little there rotting on the tree before it has a chance to ripen; corn stalks trying their level best to reach the sky, and the exceedingly diminutive and insignificant nubbin pointing skyward also, the corn yielding a paltry 10 or 15 bushels per acre when there was stalk growth sufficient to apparently insure the making of at least four times the amount.

Now, these are all familiar instances, every farmer has seen them to a greater or less extent, but, as previously stated, give a reason therefore that said crops were planted "on the wrong side of the moon;" or that the land was too rich for said crops. We ourselves have repeatedly heard these reasons given, and from otherwise quite intelligent and wide-awake farmers. Knowing absolutely nothing of plant food, how obtained, or whence obtained, as a matter of course, the above solutions of the mystery are the best they can give, or can reasonably be expected to give. Aforesaid instances are each and all a very plain indication of a lack of proportion of the plant food contained within the soil.

We stated the case as it is often stated by others, that the evils above mentioned were brought about by an excess of nitrogen. We now claim that the aforesaid condition is not due to excess of nitrogen, in the sense of there being too much nitrogen present in the soil; but is owing to "a lack of potash and phosphoric acid" in quantity sufficient to properly "balance" or bring about a due "proportion," or an equilibrium of each of the three leading elements of fertility, to-wit: the nitrogen, phosphoric acid, and potash. This done, and the supposedly deleterious influences attributed to the moon cease as if by magic, and the land that was said to be "too rich," though made vastly richer by the liberal addition of potash and phosphates, gets a hump on itself and brings forth an astonishing yield of ears and heads as well as stalks and straw; tubers as well as tops and vines; and more fruit as well as being of better quality, while the wood growth is correspondingly circumscribed.

Owing to the necessary amount of nitrogen being present, the leaf and stalk growth is sufficient for all purposes; owing to the presence of phosphoric acid in sufficient quantity to supply the plants' utmost needs in this direction, said plants are as fruitful as heart could wish, and owing to the presence in the soil of the necessary amount of potash, the small grains are plump and heavy and well filled out, while the stalk growth is robust and vigorous enough to cause it to be able to hold up its own head, no matter how large and heavy is said head, through being liberally fed all through life, may get to be. No complaint of "lodging" then. The cause of said lodging has been effectually removed, and such being the case, the evil effects brought about as a necessary result of said cause are as certain to cease as the original cause was to bring its evil effects in its train.

Manure is the very "backbone of good farming;" it has been termed "the farmer's bank," and as long as one confines himself strictly to the truth, too much of it cannot be used, yet being nitrogenous in its nature and composition, and being deficient in both phosphoric acid and potash for most satisfactory and profitable results, both potash and phosphates should be freely used in conjunction therewith, and must be, if the very best possible results are ever to be obtained. The tendency of phosphates is to increase fruitfulness, having more to do with the number of fruits set than to the quality of said fruit, while potash on the other hand seems to exert its influence almost exclusively in increasing, not the number of fruits set, but the quantity and size, as well as quality of said fruit. Notably is this the case with the potato. Potash increases the quantity of starch in all starch bearing plants. As potatoes and corn are composed mainly of starch, it is futile to expect a large crop of either where potash is deficient. In peaty or boggy soils, no matter how great may be the supply of organic nitrogen, and no matter how well drained they may be, the tubers, if any at all are formed, are undersized, waxy and watery. This is entirely owing to the lands being deficient in potash. No amount of stable manure will remedy the difficulty, on the contrary, stable manure is invariably unnecessary, and its effects injurious on such soils.

Except where the trees are very strong, or on extremely poor soils, stable manure is injurious in the orchard. Certainly its use is unnecessary, uncalled for, and unprofitable in many instances where used; while potash and phosphates just as invariably bring both satisfaction and profit.

We offer no apology for having so much to say about potash. Our reason for so doing being that many farmers seem to think that an application of phosphates alone, and without the addition of potash is all-sufficient, and furthermore, that the possession and application of liberal quantities of stable manure obviate the necessity for the purchase of chemical fertilizers. But such is by no means the case, as evidenced by the farmers of Jefferson County, Wis., in not being able to raise oats on account of their lodging. Forty pounds of acid phosphate and twenty pounds of kainit should be added to each two-horse wagon load of stable manure. It takes about this amount of those substances to properly proportion or balance the plant food contained in said manure, and to correct the excess of nitrogen.

Of course, where kainit has been used in the stables, sprinkled over the floor of said stable, at the rate of one pound per day for each horse or cow, as should be done in all well-conducted stables, for the prevention of the loss of ammonia by heating, the further addition of kainit may be omitted and phosphates alone be added. G. H. TURNER.

Lafayette Co., Miss.

BENTON CO., MO., NOTES.

Editor RURAL WORLD: Considerable alfalfa seed has been sown in this county but while some has done well, only a small per cent has been successful. Weeds and the drouth of July and August probably destroyed the plants. If the ground is properly prepared and the seed sown in early fall it might be more successful. Rape seed that I sowed August 5 made a fine growth; that sown later did not come up until Sept. 15. I think cow peas and rape will make a great addition to Missouri Farmers' crops. JOHN JAY HART.

CAPE GIRARDEAU CO., S. E. MO.—Early frost injured late corn considerably, also the stock peas, sweet potatoes and pastures. The weather is again very dry, and springs and wells that continued to furnish water through the drouth of July and August are now failing. Very little wheat has been sown.

Sept. 27. J. J. SAWYER.

The Dairy

DAIRY CONVENTION DATES.

MISSOURI STATE DAIRY ASSOCIATION, Palmyra, Nov. 7, 8, 9. Levi Chubbuck, Secretary, St. Louis, Mo.

IOWA DAIRYMEN'S ASSOCIATION, Dubuque, Nov. 12, 13, 14. J. C. Daly, Secretary, Charles City, Iowa.

MINNESOTA STATE Butter and Cheese Makers' Association, St. Cloud, Nov. 20. J. K. Bennett, Secretary, Clinton Falls.

WISCONSIN DAIRYMEN'S ASSOCIATION, Menomonee, Feb. 12-16, 1902. G. W. Burchard, Secretary, Ft. Atkinson, Wis.

THE MISSOURI DAIRY MEETING

At Palmyra, Mo., Nov. 7-8-9.

In response to the call for suggestions from dairymen as to subjects they would like to have discussed at the coming meeting of the Missouri Dairymen's Association, Secretary Levi Chubbuck has received the following:

THE SECRET OF SUCCESS.—Robert Sellors, general manager of the Bonne Terre (Mo.) Farming and Cattle Company, writes: "I would say that, in my judgment, the secret of the Missouri Dairymen's success in the future lies chiefly in their raising on the farm what they need for the cows," and he therefore thinks that a discussion of this "secret of success" should have a prominent place on the program.

SILOS AND ENSILAGE.—R. H. Pethebridge, St. Louis, suggests along the same line, that a prize be offered for the best sample of ensilage exhibited, 15 or 20 pounds, cut out in a block, competition to be open to all the states, this to be made the means of conveying to the delegates information as to the character and varying quality of ensilage, and of securing information in regard to the proper construction of silos, how to fill and what to grow for ensilage crops.

THE BABCOCK TESTER.—Geo. V. Saffarrans, Palmyra, Mo., writes that the Babcock tester is, in his opinion, the most important factor in a creamery, and suggests that there should be a lecture on the subject by an expert and a demonstration of how the tester should be used.

THE JERSEY COW.—Mr. Saffarrans also suggests that there should be a paper on the handling of Jersey cows, and that a herd of selected cows should be placed near the convention hall to be used for illustrative purposes.

THE OLEO QUESTION.—Chas. Y. Knight, editor Chicago "Produce," says: "I hope you will give your people a stirring up on this" (the oleomargarine question).

With the assembling of Congress in December, the agitation in favor of the Grout bill, left "in committee" by the last Congress, will begin anew. It is, probably, the bill most important to the interests of American farmers and dairymen that the coming Congress will have to deal with. The Interstate Commerce law and relevant legal decisions operate to make partially or entirely ineffectual state legislation against the sale of oleomargarine, renovated butter, etc., in the guise of genuine butter. National legislation seems the only effective remedy. Arrayed on the side of the Grout bill is practically every farmer and dairyman. Opposed to it are the manufacturers of oleomargarine, etc., including several of the large packers, and behind them is unlimited capital. The action of Congress is awaited with interest.

The wish is expressed in this connection that the Missouri State Board of Agriculture, which has charge of the enforcement of the state anti-color oleo law, report to the coming meeting its measure of success in enforcing the law.

DOES IT PAY?—H. A. Bereman of the Bereman Farm Dairy Co., Normandy, Mo., suggests a pregnant subject in the question, Does it pay? The phase of the subject he would like to have discussed is that which would develop the method of determining when one is making the business pay or not. We are told that dairying, when intelligently followed, is one of the most profitable lines of farming, but how many dairymen in Missouri or any other state are prepared to give figures that prove that dairying does or does not pay?

MISSOURI AS A DAIRY STATE.—W. W. Marple, manager of the Blue Valley Creamery, St. Joseph, Mo., says Missouri is naturally a better dairy state than is Iowa, yet the latter received annually more than $21,000,000 for the butter shipped from the state, while Missouri pays out yearly $400,000 in excess of what is received for butter. And Missouri farmers do not make good the deficiency by a greater production of cereals as is assumed by some, for statistics show that she is behind Illinois, Iowa, Nebraska and Kansas in value of cereals produced. (See RURAL WORLD of September 25, page 2.) Mr. Marple would like to have the Missouri Dairy convention discuss this condition of affairs and determine, if possible, how the state can be made to take more equal rank with her sisters as a dairy state.

DAIRY INSTRUCTION NEEDED.—That Missouri dairymen can make good butter has been amply proven by the scores obtained at every scoring this season at the Pan-American Exposition, and on numerous other occasions. It is therefore incumbent on someone to show the farmers of the state generally that it will pay them to give more attention to dairying. This, it is suggested, the newly appointed professor of Dairy Husbandry in the Missouri Agricultural College, Prof. C. H. Eckles, and his assistants, will undertake to do, making large use of the Palmyra meeting to that end.

THE WORLD'S FAIR CITY.—St. Louis as a market for dairy products is a subject of great importance and worthy of consideration at the Palmyra meeting. The daily consumption of milk in St. Louis is about 30,000 gallons, more than one-half of which is produced from about 8,000 cows that are maintained within the city limits in what are commonly called "swill dairies," and fed largely on distillery swill and refuse from the breweries—hence the name, "swill dairies." The unhealthful character of the milk produced from cows fed on this food and kept for the most part in very unsanitary quarters has led the City Health Department to regard these dairies as a menace to the public health, and the desire is that they be banished from the city. This desire is intensified and made vastly more urgent because of the World's Fair to be held in St. Louis in 1903. But if the product of 8,000 cows is to be cut out of the present supply, there will be need for a greatly increased production of milk in the farming territory within easy reach of St. Louis by rail. It is suggested that "St. Louis as a Milk Market" would be a profitable subject for discussion at the coming meeting. It is further suggested along this line that St. Louis has great advantages as a consuming and distributing market for butter and cheese. The consuming population is large and growing rapidly, and during the next few years there will be an enormous increase in consumption, and as a distributing point St. Louis should be unsurpassed.

These few suggestions have opened up a wide field, but do not cover near all the ground covered by the dairy industry. Who has other suggestions?

CEDAR HILL JERSEY FARM NOTES.

Editor RURAL WORLD: To-morrow morning our corn crop will begin traveling up the ensilage cutter carrier, at the rate of ten tons per hour. Ten tons per hour means one acre of our crop this year, and one acre of corn means an hour's work with the corn binder and a little over one-third of a ball of twine.

The past week our ensilage cutter has been at a neighbor's filling a 250-ton silo. This man thought a blower elevator was the thing, so bought one, and after two days fussing with it, threw it aside and got a rig that would cut and elevate. The blower, if it would work, is an expensive method, as it requires so great a power, fully one-third more than a slat carrier; and it delivers it into the silo in a regular tornado, making it very disagreeable for men who are in the silo.

I was over in Iowa last week and saw several dairy and stock farms equipped with silos. The cost per ton for labor in filling silos I found varied greatly. In the case of hand-cut corn, the cost was as high as $1 per ton. I found a man with a corn binder and good cutter who reported that 75 cents was as low as he ever succeeded in getting his ensilage cut. I found in every case that the best methods were not used—such as low-down wagons, ample power, first-class cutters, willing men and a good manager. Another thing is tons per acre. So many people try to produce large yields of fodder by planting corn that is planted for the grain yield. What we want is a very large yield of stalks and foliage and a small ear. We can cut 15 tons per acre cheaper than 10 tons in proportion to yield. Our corn and sorghum will be mixed as cut, load and load as long as sorghum lasts, which will be quite a while, as we have 12 acres and we look for 14 or 15 tons per acre from it. While we will employ 14 men, we expect a larger number with us. The extra ones will be students. They will come from different parts of this state, Iowa, Ohio and Missouri.

THE MISSOURI DAIRY CONVENTION to be held at Palmyra, Mo., will be a good place to give the feed question careful study, and I am sure those who have been writing me regarding what to feed and what to buy will be well paid for attending. At no time in the past has there been so much need for knowledge along this line as at present, and I hope that on the program for the meeting the feed question will be given a prominent place.

Take the case at Cedar Hill, with 10 horses, 90 head of cattle and 40 hogs. We do not expect to buy any corn if price is above 45 cents. Why? Because we can buy other feeds that are cheaper. We can not buy oats, as there is no margin of profit. Every feeder should know the chemical composition of every grain and by-product, its practicability and its adaptability to all kinds of farm stock.

Warren Co., Ill. "BUFF JERSEY."

THE MODEL DAIRY

At the Pan-American Exposition.

Editor RURAL WORLD: The American Holstein Breeders' Association brought a number of cows to the grounds to illustrate their system of qualification for the Advanced Registry. These cows were brought near Buffalo to a farm some five weeks before entering on the Pan-American Exposition grounds, to calve and prepare them for the test.

Comparing the work done in both barns we find that during the best week of the leading cow in the Model Dairy herd, the Guernsey cow, Mary Marshall, is credited with 14.01 pounds of butter fat. Cassiopia, also a Guernsey, made within a fraction of the same amount. The Canadian Jersey Primrose, is credited with 12.74; the Red Poll cow, Mayflower, 12.78; the Canadian Ayrshire cow, Lady Flora, 12.85, and the Canadian Holstein, Beauty of Norval, 12.06. This was in their ordinary run of work during the entire summer, not a one week test, consuming from 12 to 13 pounds of grain feed per day at a cost of about 10 cents. But one of the Holstein cows has equaled this; she made during the week 15.02 of fat, but her grain feed was more and cost more. Two others made 13.36 and 13.04, respectively, while the others varied from 10.24 to 12.92. This surely shows that the Model Dairy cows have done better work when all things are considered.

In the Model Dairy the question of net profit is the only one considered in the awards, consequently the question of greatest production has never influenced the work. The cost of production is always apparent in the Model Dairy, but was not taken into consideration in the Holstein test.

The Holstein people were accorded every aid, facility and opportunity by the officials of the Model Dairy before and during their test. J. FRED SCHLAPPI,
Superintendent of Feeds.
Buffalo, N. Y.

THE FRENCH CANADIAN COWS at the Model Dairy at the Pan-American have attracted a great deal of attention. They have produced a fair amount of milk of an average quality on a cheaper ration than has generally been considered possible. They have been affected less by heat and cold and other unusual conditions of their surroundings than any other breed. With their strong constitutions, the ability to take care of themselves, together with their liking and easy assimilation of coarse feed, they have evidently a place in our **American dairy economy.** During the experiments at the Model Dairy they have won a great many favorable comments. Coming here as strangers, the American farmers already feel that they have made a new and valuable acquaintance.

DAIRYING IN MARION CO., MO.

The following from the Marion County, Mo., "Herald" will be of interest to dairymen who expect to attend the coming meeting of the Missouri State Dairy Association at Palmyra, Mo., Nov. 7-9, 1901.

Marion County is well adapted to dairying. Finer blue grass grows naturally here than is raised in Kentucky. Living springs abound and good water can be struck all over the county at an average depth of 100 feet. Our winters are not very long and cows can be wintered cheaply. Good land for dairy purposes within a few miles of Palmyra can be bought as low as $25 per acre and better land with good improvements for $40 per acre. Our creamery has been in operation for about one year. It has about 80 patrons and for the past six months the payroll has been about $1,800 per month. Many of the patrons had practically no experience in handling cows before the creamery began operations and many of them are now milking cows that have no business in a dairy. This results in a wide range in the average monthly returns per cow. We have taken a few names at random among the patrons and give the results for the past four months. Ira Suter milked nine cows and received for his cream $197.14. During the four months his cows were on blue grass pasture and were fed no grain. Clarence Dearing milked 10 cows and received $190.29. Wm. Glendinning milked 14 cows and received $164.89. Chas. Schaich milked six cows and received $64.57. E. L. Buckwalter milked 12 cows and received $185.15. I. K. $263.57. J. B. Leggett milked nine cows and received $145.83. It will thus be seen that cows averaged all the way from $2.75 to $5.40 per month for the period of four months. It must be borne in mind that the farmers get the skim milk back and the value of this as a feed for hogs and calves is hard to estimate. We think the above figures abundantly prove what the "Herald" has often claimed, that a man who understands dairying can make a living on 40 acres near Palmyra and can get rich on 80 acres.

Jas. Curd's silo is completed and now contains 20 acres of corn cut to the required dimensions. The silo is 30 feet high and 14 by 14 feet. It is square in shape, the corners being cut off. Its capacity is from 75 to 100 tons. We hope Mr. Curd's experiment will prove a success in every particular.

Ira Suter has been averaging over $5 a head on his cows ever since the creamery started. His cream has never failed to reach the creamery in good condition. All during the dry weather and extreme heat of July and August his cows had only blue grass and good water, no grain of any kind, and they averaged him over $5 a head per month. The "Herald" likes to print such items as this. We preach the doctrine that if a farmer wants to be successful he must work with his brains as well as with his hands, and such items as this prove it.

THE QUEEN'S DAIRY.

The Consort of England's King is Fond of Cows and Milk.

One hears so much of the Queen of England's fondness for dairying, but not so much has been written of the dairy itself, says an exchange.

The picturesque building is a superior Swiss cottage, pleasantly covered and shaded with climbing plants and contains several apartments, the dairy itself being a charmingly cool and lofty room, 20 feet square, with a tiled floor and a handsome high dado of rare old blue and white Indian tiles. The best ornament of the dairy consists of 30 or 40 flat pans of delicious milk placed on a row of tables around the room.

In the center is a two-tier white marble table, on which are displayed colored German drinking glasses, silver cream ewers and spoons and the queen's own strawberry dish of white glazed porcelain, a strawberry plant in natural colors twining about it. Above the triple window hangs on a shield the head of Jewess IV., which, owned by his present majesty, gained the champion prize at the 1874 cattle show. Underneath is a bronze statuette of a Jersey champion bull, presented by the king. A small fountain supported by a china stork keeps the place refreshingly cool.

In the adjoining butter room, with its walls of plain blue glazed tiles, is a wonderful collection of china animals, including bulls, dogs, cats and hares, as well as almost every sort of jug. Devonshire cream and butter and cream cheese are made for the supply of Sandringham or Marlborough house.

Her majesty's own private tea room is tastefully furnished and decorated, and contains some valuable china and artistically painted tiles and plaques. A bust of her late majesty occupies a prominent position on the marble mantelpiece, which is draped with olive velvet and surmounted by a mirror in a massive ebony frame, surrounded by rich blue plates and vases. This lovely apartment is a favorite resort of the royal family for "5 o'clock" with fruit from the neighboring gardens.

THE COW QUESTION.

It does seem difficult to prevent misunderstandings. Again and again have I defined my position on the cow question, and even now many do not seem to understand it, says Prof. Shaw. At the risk of being monotonous to some readers, I will again state my views on this great question. I do not want to be misunderstood. The following is my creed: I believe in the straight dairy cow. The dairyman, whose chief interest lies in milk and who does not care much for the beef product which he may get, ought to keep this cow. She will always occupy a very important place among the herds of the nation. The men who are thus employed should not only keep this cow, but they should also improve her in the lines of milk giving, quantity and quality considered to the greatest extent possible consistent with the retention of good stamina.

I believe in a straight beef cow. She should possess beef form in high excellence. This cow is not to be milked, but is to suckle her calf. Her place is on the range. She should also be kept on the large farm where it is not practicable to milk the cows that may be kept.

I also believe in the cow between these two extremes. A large, roomy cow of nice form that will be a good milker, that will fatten nicely when dry, and that will, when properly mated, produce a calf that will grow large and that will make good beef. The place for this cow is the arable farm of good production, in which the farmer is desirous of securing a goodly supply of both milk and meat. The poor milkers that may from time to time show themselves ought to be turned off for beef as soon as their poor milking qualities are known. What is there in the above that is at all unkind or unfair to the interests of straight dairy cattle?

THE MODEL DAIRY COW TEST.

Report of Pan-American Model Dairy Test Giving Totals of Each Herd Complete From the Commencement of the Test May 1st Up to and Including the Week Ending September 10, 1901.

Name of Herd.	Lbs. Milk	Amt. of Butter	Value at 25c Per Lb.	Value Hay Fed	Value Silage Fed	Value Grain Fed	Total Cost Feed	Profit
Holstein	29487.8	1098.67	274.39	26.18	16.16	74.28	116.71	157.19
Shorthorns	22310.0	1006.35	251.76	27.21	16.12	73.26	117.43	131.92
French Canadians	19365.2	889.92	217.48	20.31	13.82	49.86	84.20	133.29
Guernseys	21244.1	1117.86	279.45	27.80	12.20	61.29	101.29	179.26
Ayrshires	25308.6	1077.60	279.39	25.63	13.75	62.49	101.79	167.50
Polled Jerseys	15820.8	846.97	211.64	25.88	9.72	44.20	79.86	131.92
Jerseys	2022.24	1085.50	271.86	23.01	13.27	62.94	92.22	172.15
Dutch Belted	19216.4	737.38	184.33	23.45	10.81	60.45	95.69	88.64
Red Polls	22526.4	1036.44	256.59	24.06	13.40	63.97	101.43	154.76
Brown Swiss	2418.56	1005.48	251.36	31.95	13.50	64.40	109.00	138.26

THE BUTTER SCORE, POSTED SEPT. 13.

	Flavor	Grain	Color	Salt	Finish	Total
Shothorns	42	24.75	14.25	10	5	96
Holsteins	41	24.5	14.5	10	5	95
Ayrshires	41.5	24.75	14.25	10	5	95.5
Jerseys	41.5	25	14.5	10	5	96
Guernseys	42	25	15	10	5	97
Brown Swiss	42	25	14.25	10	5	96.25
Red Polls	42	24.75	14.25	10	5	96
Polled Jerseys	41	25	14.75	10	5	95.75
Dutch Belted	41.5	25	14.25	10	5	95.75
French Canadian	41	25	14.25	10	5	95.25
Perfect	45	25	15	10	5	100

DAIRY CATTLE AWARDS

At the Pan-American Exposition.

BROWN SWISS.—Herd.—First prize, McLaury Bros., Portlandville, N. Y.; second, E. M. Barton, Hinsdale, Ill.; third, F. R. Hazard, Syracuse, N. Y.

Bull, three years or over.—First prize, McLaury Bros.; second, McLaury Bros.; third, E. M. Barton.

Bull, two years and under three.—First prize, McLaury Bros.; second, E. M. Barton; third, F. R. Hazard; fourth, E. M. Barton.

Bull, one year and under two.—First, E. M. Barton; second, E. M. Barton; third, McLaury Bros.

Bull, under one year.—First prize, E. R. Hazard; second, E. M. Barton; third, E. M. Barton; fourth, McLaury Bros.

Cow, three years or over.—First prize McLaury Bros.; second, E. M. Barton; third, E. M. Barton; fourth, McLaury Bros.; fifth, F. R. Hazard.

Heifer, two years and under three.—First prize, McLaury Bros.; second, F. R. Hazard; third, E. M. Barton; fourth, E. M. Barton.

Heifer, one year and under two.—First prize, McLaury Bros.; second, E. M. Barton; third, F. R. Hazard; fourth, F. R. Hazard; fifth, E. M. Barton.

Heifer calf.—First prize, E. M. Barton; second, McLaury Bros.; third, E. M. Barton; fourth, F. R. Hazard; fifth, McLaury Bros.

Sweepstakes, bull, any age.—First prize, McLaury Bros.

Sweepstakes, cow, any age.—First prize, McLaury Bros.

JERSEYS.—Herd.—First prize, McLaury Bros.; second, Biltmore Farms, Biltmore, N. C.; third, H. N. Higginbotham, Joliet, Ill.

Bull, three years or over.—First prize, Biltmore Farms; second, H. N. Higginbotham; third, H. N. Higginbotham; fourth, McLaury Bros.

Bull, two years and under three.—First prize, Biltmore Farms; second, McLaury Bros.; third, Lewis E. Benedict, Lutherville, Md.

Bull, one year and under two.—First prize, R. A. Sibley, Rochester, N. Y.; second, McLaury Bros.; third, H. N. Higginbotham; fourth, H. N. Higginbotham; fifth, Lewis E. Benedict.

Bull, under one year.—First prize, H. N. Higginbotham; second, McLaury Bros.; third, A. H. Cooley, Little Britain, N. Y.; fourth, Biltmore Farms; fifth, H. N. Higginbotham.

Cow, three years or over.—First prize, Charles A. Sweet, Buffalo, N. Y.; second, McLaury Bros.; third, H. N. Higginbotham; fourth, H. N. Higginbotham; fifth, Biltmore Farms.

Heifer, two years and under three.—First prize, McLaury Bros.; second, Biltmore Farms; third, A. H. Cooley; fourth, H. N. Higginbotham; fifth, Biltmore Farms.

Heifer, two years and under three.—First prize, McLaury Bros.; second, Biltmore Farms; third, A. H. Cooley; fourth, H. N. Higginbotham; fifth, Biltmore Farms.

Heifer, one year and under two.—First prize, McLaury Bros.; second, Biltmore Farms; third, Lewis E. Benedict; fourth, H. N. Higginbotham; fifth, Biltmore Farms.

Heifer calf.—First prize, H. N. Higginbotham; second, A. H. Cooley; third, H. N. Higginbotham; fourth, Biltmore Farms; fifth, H. N. Higginbotham.

Sweepstakes, bull, any age.—First prize, Biltmore Farms.

Sweepstakes, cow, any age.—First prize, Charles A. Sweet.

SPECIALS OF AMERICAN CATTLE CLUB.—JERSEY.—First prize.—First, C. A. Sweet; second, Biltmore Farms.

Second prize.—First, Biltmore Farms; second, A. H. Cooley.

Third prize.—First, A. H. Cooley; second, Biltmore Farms; third, Biltmore Farms; fourth, H. N. Higginbotham.

Fourth prize.—First, Biltmore Farms; second, McLaury Bros.; third, A. H. Cooley.

Fifth prize.—First, C. A. Sweet; second, H. N. Higginbotham; third, Biltmore Farms; fourth, A. H. Cooley.

Sixth prize.—First, bull, Biltmore Farms, second, cow, C. A. Sweet.

AYRSHIRES.—Herd.—First prize, W. W. Ogilvie Co., Lachine Rapids, Quebec; second, Robert H. Ness, Howick, Que.; third, Robert Reford, St. Anne de Bellevue P. O.

Bull, three years or over.—First prize, W. W. Ogilvie Co.; second, Robert A. Reford; third, Robert R. Ness; fourth, J. F. Converse & Co., Woodville, N. Y.

Bull, two years and under three.—First prize, Robert R. Topping, Amsterdam, N. Y.; second, W. W. Ogilvie Co.; third, Robert A. Reford; fourth, J. G. Clark, Ottawa, Ont.

Bull, one year and under two.—First prize, G. W. Bell, Rome, N. Y.; second, J. F. Converse & Co.; third, J. C. Clark; fourth, Robert R. Topping.

Bull, under one year.—First prize, Robert R. Ness; second, Robert R. Ness; third, J. F. Converse & Co.; fourth, R. Reford; fifth, W. W. Ogilvie.

Cow, three years or over.—First prize, J. F. Converse & Co.; second, W. W. Ogilvie Co.; third, W. W. Ogilvie Co.; fourth, Robert R. Ness.

Heifer, two years and under three.—First prize, Robert R. Ness; second, J. G. Clark; third, Robert Reford.

Heifer, one year and under two.—First prize, Robert R. Ness; second, W. W. Ogilvie; third, W. W. Ogilvie Co.; fourth, Robert Reford; fifth, Robert R. Ness.

Heifer calf.—First prize, W. W. Ogilvie; second, Robert R. Ness; third, W. W. Ogilvie; fourth, W. W. Ogilvie; fifth, W. W. Ogilvie.

Sweepstakes, bull, any age.—First prize, W. W. Ogilvie.

Sweepstakes, cow, any age.—First prize, Robert R. Ness.

HOLSTEIN-FRIESAN. — Herd. — First prize, Easthope & Biery, Niles, Ohio; second, George Rice, Curries Crossing, Canada, Ont.; third, Henry Stevens & Sons, Lacona, N. Y.; fourth, T. A. Mitchell, Weedsport, N. Y.; fifth, Highlawn Farm, Auburn, Mass.

Bull, three years or over.—First prize, Highlawn Farm; second, T. A. Mitchell; third, G. W. Clemons, St. George, Ont.; fourth, Henry Stevens & Son; fifth, J. H. D. Whitcomb, Littleton, Mass.

Bull, two years and under three.—First prize, Easthope & Biery; second, G. W. Clemons; third, Henry Stevens & Sons; fifth, J. H. D. Whitcomb, Littleton, Mass.

Bull, one year and under two.—First prize, Highlawn Farm; second, T. A. Mitchell; third, Easthope & Biery; fourth, Henry Stevens & Sons; fifth, Easthope & Biery.

Bull, under one year.—First prize, G. W. Clemons; second, Henry Stevens & Sons; third, J. H. D. Whitcomb; fourth, George Rice; fifth, Henry Stevens & Sons.

Cow, three years or over.—First prize, George Rice; second, Easthope & Biery; third, Henry Stevens & Sons; fourth, Henry Stevens & Sons; fifth, T. A. Mitchell.

Heifer, two years and under three.—First prize, Henry Stevens & Sons; second, George Rice; third, T. A. Mitchell, Weedsport, N. Y.; fourth, J. H. D. Whitcomb; fifth, Highlawn Farm.

Heifer, one year and under two.—First prize, G. W. Clemons; second, Henry Stevens & Sons; third, George Rice; fourth, George Rice; fifth, T. A. Mitchell.

Heifer calf.—First prize, G. W. Clemons; second, Henry Stevens & Sons; third, Easthope & Biery; fourth, T. A. Mitchell; fifth, Easthope & Biery.

Sweepstakes, bull, any age.—First prize, Easthope & Biery.

Sweepstakes, cow, any age.—First prize, George Rice.

Special prizes offered by the Holstein-Friesian Association.—Prize No. 1.—First prize, G. W. Clemons; second, Henry Stevens & Sons; third, Easthope & Biery; fourth, T. A. Mitchell; fifth, George Rice. Prize No. 2—First prize, Easthope & Biery; second, G. W. Clemons; third, Henry Stevens & Sons. Prize No. 3—First, T. A. Mitchell; second, Easthope & Biery; third, G. W. Clemons; fourth, Easthope & Biery.

GUERNSEY.—Herd.—First prize, Clayton C. Taylor, Lawton Station, N. Y.; second, L. P. Morton, Rhinecliff, N. Y.; third, F. B. Buckley, Valley Falls, N. Y.

Bull, three years or over.—First prize, Clayton C. Taylor; second, L. P. Morton; third, F. B. Buckley.

Bull, two years and under three.—First prize, L. P. Morton; second, F. B. Buckley; third, Lewis E. Benedict, Mgr.

Bull, one year and under two.—First prize, W. E. H. Massey, East Toronto, Ont.; second, Clayton C. Taylor; third, Clayton C. Taylor; fourth, L. P. Morton; fifth, Lewis E. Benedict.

Bull, under one year.—First prize, Clayton C. Taylor; second, F. B. Buckley; third, Clayton C. Taylor; fourth, Lewis E. Benedict; fifth, Clayton C. Taylor.

Cow, three years or over.—First prize, W. E. H. Massey; second, Clayton C. Taylor; third, W. E. H. Massey; fourth, L. P. Morton; fifth, W. E. H. Massey.

Heifer, two years and under three.—First prize, F. B. Buckley; second, Lewis E. Benedict; third, L. P. Morton; fourth, Clayton C. Taylor; fifth, F. B. Buckley.

Heifer, One year and under two.—First prize, Clayton C. Taylor; second, L. P. Morton; third, L. P. Morton; fourth, F. B. Buckley; fifth, Clayton C. Taylor.

Heifer calf.—First prize, Lewis E. Benedict; second, Clayton C. Taylor; third, Clayton C. Taylor; fourth, Clayton C. Taylor; fifth, F. B. Buckley.

Sweepstakes, bull, any age.—First prize, Clayton C. Taylor.

Sweepstakes, cow, any age.—First prize, W. E. H. Massey.

Special Awards Guernsey Association.—Breeders Young Herd.—First prize, Clayton C. Taylor; second, F. B. Buckley; third, Clayton C. Taylor.

Bull with get.—First prize, F. B. Buckley.

Cow with produce.—First prize, Clayton C. Taylor; second, F. B. Buckley; third, Clayton C. Taylor.

Sweepstakes.—Bull.—Clayton C. Taylor Cow—W. E. H. Massey.

Herds.—First prize, Clayton C. Taylor; second, L. P. Morton; third, F. B. Buckley.

FRENCH CANADIAN.—Herd.—First prize, Arsene Denis, St. Norbert, Can.; second, C. E. Colburn, Portlandville, N. Y.; third, Jas. Dugas & Co., St. Jacques, Que.; fourth, Louis Thouin, Repentiquy, Que.; fifth, Louis Sylvester, St. Theodore d'Alton, Que.

Bull, three years or over.—First prize, Arsene Denis; second, C. E. Colburn; third, Jas. Dugas & Co.; fourth, Louis Thouin.

Bull, two years and under three.—First prize, Jas. Dugas & Co.; second, Louis Thouin; third, Louis Sylvestre; fourth, Arsene Denis; fifth, John Gardner, Downington, Pa.

Bull, one year and under two.—First prize, C. E. Colburn; second, Arsene Denis; third, Louis Thouin; fourth, John Gardiner; fifth, Louis Sylvestre.

Bull, under one year.—First prize, Arsene Denis; second, Louis Sylvestre; third, John Gardiner; fourth, Jas. Dugas & Co.; fifth, Louis Thouin.

Cow, three years or over.—First prize, C. E. Colburn; second, Jas. Dugas & Co.; third, Louis Thouin; fourth, C. E. Colburn; fifth, C. E. Colburn.

Heifer, two years and under three.—First prize, Arsene Denis; second, Louis Thouin; third, C. E. Colburn; fourth, C. E. Colburn; fifth, Louis Sylvester.

Heifer, one year and under two.—First prize, Arsene Denis; second, John Gardiner; third, James Dugas & Co.; fourth, C. E. Colburn; fifth, C. E. Colburn.

Heifer, calf.—First prize, Arsene Denis; second, Jas. Dugas & Co.; third, Louis Thouin; fourth, C. E. Colburn; fifth, Louis Sylvestre.

Sweepstakes, bull any age.—First prize, Arsene Denis.

Sweepstakes, cow any age.—First prize, Jas. Dugas & Co.

POLLED JERSEYS.—Herd.—First prize, James R. Orr, Cedarville, Ohio; second, A. Mohr, Buffalo, N. Y.: third, J. S. Brown, Cedarville, Ohio; fourth, W. H. Forbes & Co., Clifton, Ohio.

Bull, three years or over.—First prize, James R. Orr; second, J. S. Brown; third, W. H. Forbes & Co.; fourth, J. S. Brown.

Bull, two years and under three.—First prize, A. Mohr; second, James R. Orr; third, James R. Orr; fourth, W. H. Forbes & Co.; fifth, J. S. Brown.

Bull, one year and under two.—First prize, J. S. Brown; second, A. Mohr; third, J. S. Brown.

Bull, under one year.—First, James R. Orr; second, A. Mohr; third, A. Mohr; fourth, James R. Orr; fifth, W. H. Forbes & Co.

Cow, three years or over.—First prize, J. S. Brown; second, A. Mohr; third, W. H. Forbes & Co.; fourth, W. H. Forbes & Co.; fifth, James R. Orr.

Cow, two years and under three.—First prize, James R. Orr; second, J. S. Brown; third, W. H. Forbes & Co.; fourth, J. S. Brown; fifth, A. Mohr.

Heifer, one year and under two.—First prize, James R. Orr; second, W. H. Forbes & Co.; third, James R. Orr; fourth, James R. Orr; fifth, A. Mohr.

Heifer, under one year.—First prize, James R. Orr; second, A. Mohr; third, W. H. Forbes & Co.; fourth, James R. Orr; fifth, A. Mohr.

Sweepstakes, bull any age.—First prize, James R. Orr.

Sweepstakes, cow any age.—First prize, J. S. Brown.

Specials offered by Polled Jersey Association.—First prize, best bull and four of his progeny, James R. Orr; second, four animals either sex under two years old, A. Mohr; third, best four animals either sex, any age, W. H. Forbes & Co.

Horticulture

SOUTH MISSOURI FRUIT GROWERS.

Seymour, Mo., Fruit Growers met Saturday, September 14, 1901, and elected the following officers: T. C. Love, President; Col. Childress, Vice President; L. S. Witmer, Secretary; F. A. Williams, Corresponding Secretary; T. J. Smith, Treasurer.

One hundred postal cards were ordered printed for distribution among fruit growers and others. It was decided that we gather and barrel our Jonathan apples the coming week, deposit in Higgins hall, from Saturday, September 21 to 23, for buyers to inspect and make us offerings, and if not sold we will send to cold storage. The next meeting will be held Saturday, Sept. 21, 1901, at 2 o'clock p. m., and every Saturday during the season.

RESOLUTIONS.—The following resolutions were adopted:

Resolved, By The Seymour Fruit Growers' Association, that it is the sense of this society that it was the purpose and intention of the state legislature, when it established the fruit experiment station at Mountain Grove, and provided for its maintenance by liberal appropriations from the state treasury, that it should be managed and controlled by a board of managers to consist of men engaged in the fruit growing industry of the state, and that when the state legislature established an agricultural college and agricultural experiment station and provided that the same should be under the management and control of the board of curators of the state university, it was expected and intended that there would be a fair representation of farmers appointed on said board of curators; therefore be it

Resolved, By this association, that our governor be respectfully requested to fill all vacancies that may occur in the future upon the board of curators of the state university by the appointment of men engaged in agricultural pursuits, until at least three of said board of nine members consists of farmers, and that all vacancies that may occur on the board of managers of its fruit experiment station at Mountain Grove be filled by the appointment of men engaged in horticulture until the entire board consists of such men.

Resolved, That a copy of these resolutions be furnished Governor Dockery, and also to the "Practical Fruit Grower" and COLMAN'S RURAL WORLD for publication, and that all agricultural societies in the state, and all individuals in these pursuits be invited to join in this petition to the governor.

J. W. NELSON NOMINATED.—In view of the fact that J. W. Nelson, of Marshfield, president of the Webster County Horticultural Society, is one of Webster county's most scientific as well as practical fruit growers, as evidenced by methods of cultivation and management of his model fruit farm in this, the banner fruit growing county in the state, all of which make him peculiarly fitted for a place on the board of managers of the Mountain Grove Fruit Experimental Station; therefore be it

Resolved, By the Seymour Fruit Growers' Association, that the governor be requested to appoint him to fill the first vacancy on the board.

Resolved, That a copy of this resolution be forwarded to Mr. Nelson with a request that he at once become a candidate for that position and forward this with his application.

Resolved, That a copy of this resolution be forwarded to the "Practical Fruit Grower," COLMAN'S RURAL WORLD and all Webster county papers for publication.

T. C. LOVE, President.
L. S. WITMER, Secretary.

CALIMYRNA FIGS.

Editor RURAL WORLD: There is nothing new under the sun except the name Calimyrna, which means the old-time Smyrna fig transplanted and propagated in the fertile soil and congenial climate of California. Californians have long boasted of their own vine and fig tree; a pardonable pride as to the vine and the fruit thereof, but the fig, though valuable, has never given complete satisfaction. This was because the growers knew it was not the very best of its kind and the people of California have never consented to accept second place in anything. As the orange was perfected by the introduction of the navel variety, so is the fig brought to a satisfactory condition by the successful cultivation of the Smyrna fig.

Adriatic figs have been grown in California for a great many years, the varieties of which are legion and the commercial value at the present time is also considerable. Attempts to grow the Smyrna fig in California dates from the year 1885, when Mr. F. Roeding of Fresno County imported from Asia Minor cuttings of the very best varieties. It was comparatively easy to import Smyrna fig trees, but exceedingly difficult to gather the fruit, owing to the fact that the fruit would not mature, but persisted in dropping off the trees when it was about one-third grown. The greatest credit is due Mr. Roeding for his persistency in keeping up his experiments and investigations under the most discouringing conditions, although he was finally assisted materially by the Department of Agriculture at Washington, and the history of the enterprise—the successes and the failures—makes very interesting reading.

In the Fresno County exhibit in the Horticulture Building at the Pan-American Expositon may be seen an exhibit of Calimyrna figs that were grown and packed by Mr. Roeding. It is in charge of Charles F. Wyer, who is ready and willing to dispense considerable information in regard to this promising infant American industry. Mr. Wyer is loyal to Fresno County and is very positive that there is some specific virtue in the soil and atmosphere of that favored locality that rendered success possible. He has a few very tasty specimens that he sometimes uses as sugar-coated clinchers to his arguments, and I know of at least one instance in which they proved effectual.

The statement is often made that the fig grows without a blossom, but this is not strictly true; in fact, it is very far from being true, as there are a great many blossoms to every fig, but the blossoms are contained within the fig and in order to see them it is necessary to cut the fig open. It is indeed a question whether the fig itself is a fruit or a composite flower. Each perfect seed in a fig represents a single flower, and it is these mature fertilized seeds, in which the germ is fully developed, that gives the fig its flavor. The best imported Smyrna figs possessed a flavor that we were unable to equal; we were also unable to discover the reason, and were about to give up when our advanced scientific botanists, from a series of experiments that involved a great deal of patient investigation, coupled with considerable expense, discovered that the Smyrna figs did not properly mature in California because they contained only female blossoms. It was also discovered that the Blastophaga psenes should have been consulted in the matter.

Instead of the fig growing without a blossom, there are four distinct kinds of blossoms found in the figs, namely: Male, female, gall and mule flowers. The first three are found in the Capri or wild figs, but because they lack the female or flavoring seed flowers, they cannot be fertilized, and in consequence of this they fail to develop flavor sufficient to render them valuable. For the same reason they could not be improved upon, as is the case with most wild fruits. The Capri or wild fig possessed the pollen necessary to fertilize the Smyrna varieties, but there was no means to carry it, and the little Blastophaga was imported for this very purpose.

These microscopical insects will live and propagate in the Capri fig, but cannot do so in the Smyrna fig; for this reason it is necessary to grow a clump of Capri or wild figs near the commercial variety. When the insect is developed the male cuts the way for the female to escape, when she immediately flies about seeking a place to deposit her eggs. While a great many of these insects are sagacious enough to select the Capri fig for this purpose, thereby producing their species, a certain number, owing to nature's caprice, make the mistake of entering the Smyrna fig, thereby losing their lives and progeny, but rendering a perfect fruiting of this variety possible; not by depositing their eggs, but by unintentionally carrying the male pollen from the Capri figs, that by an apparent accident adheres to their bodies and wings.

These little insects were not colonized in California without considerable difficulty, as the first attempts are remembered as signal failures. Persistency in this respect, however, as in a great many others, finally received a suitable reward, and the American cultivation of what is now the best flavored and most valuable commercial fig to be found in any country, was rendered possible. There is something in the climate or soil, or both, that has improved the fig by transplanting it in its foster home. It is not only sweeter than the Smyrna, but it has in some mysterious manner lost the peculiar acrid flavor that is objectionable in the Turkish product.

The Calimyrna fig matures from the middle of August to the latter part of September, when the crop is not harvested in the usual way, but is allowed to drop on the ground. The figs are gathered up every second day and carried to the drying ground, where they are dipped in boiling brine, a concoction made by dissolving three ounces of salt to a gallon of water. This dipping hastens the drying process and renders the skin soft and pliable. When sufficiently dry they are placed in boxes for the sweating or equalizing process which occupies about two weeks' time. They are then washed in cold salt water for the purpose of removing all dirt as well as the lighter figs, which come to the surface when a batch is immersed in the salty water. The crop is finally put up in attractive commercial packages and sent out to the trade.

HERBERT SHEARER,
Buffalo, N. Y.
Bazaar Building.

TALK ABOUT APPLES.

The apple contains a larger percentage of phosphorous than any other fruit or vegetable. This phosphorous is admirably adapted for renewing the essential nervous matter, lethicin of the brain and spinal cord, says Chicago "Record-Herald." The old Scandivanian traditions represent the apple as the food of the gods, who, when they felt themselves to be growing old and feebie and infirm, resorted to this fruit for renewing their powers of mind and body. The acids of the apple are also of signal use for men of sedentary habits whose livers are sluggish in action. These acids serve to eliminate from the body noxious matters, which, if retained, would make the brain heavy and dull or bring about jaundice or skin eruptions and other allied troubles.

The ancient practice of taking apple sauce with roast pork, rich goose and like dishes is based on scientific reasons. The malic acid of ripe apples, either raw or cooked, will neutralize any excess of fatty matter engendered by eating too much meat. Fresh fruits, such as the apple, the pear and the plum, when taken ripe and without sugar, diminish acidity in the stomach rather than provoke it. Their vegetable salts and juices are converted into alkaline carbonates, which tend to counteract acidity.

A good, ripe, raw apple is one of the easiest of vegetable substances for the stomach to deal with, the whole process of its digestion being completed in 85 minutes. Besides these medicinal qualities of the apple, it has great virtue for local applications. The paring of an apple cut somewhat thick is an ancient remedy for inflamed eyes, being tied on at night when the patient goes to bed. In France a common remedy for inflamed eyes is an apple poultice, the apple being roasted and its pulp applied over the eyes without any intervening substance.

Trumpet vines are good for covering rough walls, but are too coarse for houses. Their profuse flowering in July is a great recommendation. This vine is wild in Southern Pennsylvania and Southward. A Japanese species grandiflora, has a much larger flower than our native one, and is of an orange yellow color.

Some people head off onion smut by transplanting, and others by the use of lime and sulphur.

IMPROVING THE APPLE CROP.

The American apple crop is rapidly becoming the leading crop of the United States so far as actual returns are concerned, and our exports of these fruits are growing larger and more valuable every year. No grain or other farm product is more generally or more widely cultivated than the apple, writes S. W. Chambers in "Michigan Farmer." This fruit is by all odds our national fruit. It is raised from Maine to Florida now, and from the Atlantic to the Pacific. It is eaten in every American home almost the year round, and England and Germany are rapidly imitating us in the matter of consumption. Our apples sell better in the European markets than any of the continental fruits, and the prices thus obtained help to swell the returns to our farmers on lands where wheat and corn fail through drouth, or where these cereals cannot be raised successfully.

The question of improving the quality of our apples, and increasing the yield, is one that more farmers are actually interested in than that of improving corn or wheat. Injury to the apple crop may not cause such ruinous disaster to some few states as corn or wheat, but it will reach a wider number of farmers in the whole country.

One of the perplexing questions in apple growing is the dropping off of fruits when very small or half grown. The waste of apples from this cause alone is enormous. Spraying will not stop the loss, for the cause seems to be deeper than the attacks of insects and blights. There is a theory that the blossoms are not properly fertilized, and that the fruit cannot consequently ever reach maturity. The apples are doomed to fall off when half grown and be wasted. Some experiments have been made recently that help to confirm this theory. In a large orchard where the dropping off was a serious handicap to successful apple raising, the attempt was made to prove or disprove this theory. Right in the midst of the orchard, which was of fifty acres, a score of bee hives were located. The bees literally swarmed in the orchard at blooming time, and the insects buzzed around the blossoms in swarms. There was little more done to the orchard other than that of ordinary spraying. That year the fruit yield was from 10 to 20 per cent higher than common. The second and third year the same practice was kept up, and the increase was even more apparent. In that orchard at least the apple trees were apparently helped by the presence of the bees.

Whether or not it would prove true in all cases is quite another question. It is a matter, however, that deserves some more extended experiment, for if bees in the orchard will perform such a useful function to our apple crop they should be raised wherever commercial apple growing is an important industry.

PERISHABLE FRUITS FOR EUROPE.

The U. S. Department of Agriculture has made it one of its missions to create a foreign market for agricultural products and to study the best methods of storing and shipping the same. At present the experts who have the subject in charge are testing the shipping of some of the perishable fruits that are raised in the United States.

Mr. W. A. Taylor of the Department of Agriculture, says that while there is extensive shipping of California fruits to Europe, the eastern states have not enjoyed that privilege to such an extent. He says it is the opinion of the department that Europe will furnish a great market for such fruits if they can be properly shipped. The subject is certainly of such importance as to warrant a thorough investigation by the government, and on Sept. 7 the first trial shipment of Bartlett pears was sent from New York on the Atlantic Transport Co.'s steamer Minneapolis to London. The fruit was gathered at Barker, N. Y., and prepared for shipment under the direction of Mr. H. P. Gould, assistant pomologist of the department, and Mr. Chas. Forster, who represents a London house. The consignment consisted of two barrels, 37 full boxes and 299 half boxes of fruit, in all 338 packages. Half the fruit was wrapped in waxed paper, the remainder was not wrapped. The fruit was handled with the greatest care and covered with tarpaulin to protect it from the weather. It is kept on shipboard at 36 degs. F. When it reaches London some will be put on sale at once, while the rest will be stored. This experiment will be followed by others.

THE PLANTING OF FRUIT TREES.

The common error in planting fruit trees is in setting them too close together, especially apple trees, 33x33 feet being close enough for most varieties on good soil. I have seen many young orchards started during the past few years to which this applies. The detrimental effects are not apparent at first, that is, to the inexperienced. And, indeed, the trees

generally do start off nice enough and flourish for a time, because the roots, being comparatively small, do not conflict with one another, writes Fred O. Sibley in the "Ohio Farmer."

The fact is, it is not until the trees have come to the bearing age that the results disappoint and dishearten all who are led into this fatal blunder; for while it is true that some of this suicidal policy arises from ignorance of natural laws governing the growth of vegetation, much of it is due to the persistence and persuasiveness of canvassers who wish to sell as many trees as possible, and also because the purchaser desire to have a large number of varieties on a small plot of ground. Cutting out every alternate tree, with a liberal dressing of fertilizers, will save an orchard even then, however, if the owner only has the intelligence and nerve to "amputate" at once. But what a loss it is to the soil, this production of every other tree which is cut down and carted away! Moreover, "the survival of the fittest" will be set back two years at least by it. It is, nevertheless, the only course to pursue. Not for a moment should the orchardist who has made such a mistake hesitate about the work.

It should also be borne in mind that apple trees need a rich, moist soil. If this is furnished, and the conditions of wide planting are fully observed, they will assume large proportions and give immense yields. Is it not better, then, to have thrifty trees which produce an abundance of healthy fine fruit, than a multitude of scraggy, sickly ones on which is seldom seen any fruit at all, and if there is, only knotty, gnarly specimens hardly fit for pigs or thieving vagrants? Certainly so, the more as the cost of purchasing, planting, and the like, all contribute toward swelling the contrast in the amount paid out. In the first instance the orchardist is almost sure to be rewarded with satisfactory results; but in the latter there cannot help but be disappointment, loss of time and money, and failure to realize adequate compensation when the trees have attained bearing age.

A NEW FRUIT PACKAGE.

The fruit package is one of the most important items in the fruit business. The fruit grower must be up-to-date in the matter of packages or he is behind the times on the whole affair of handling fruit. Much depends on a good package. It is a maxim in some markets that "the package sells the fruit." One ought to be careful about carrying that theory too far, but there is a good deal in it, nevertheless, writes Prof. F. A. Waugh in the "Kansas Farmer."

The newest and most interesting package in the American fruit trade is probably the so-called "six-basket carrier." This first came into extensive use in the Philadelphia and Baltimore markets about four years ago; but it did not become firmly established until it was taken up by the Georgia peach shippers. It proved to be peculiarly suited to their needs, and it is now frequently seen in all the northern markets, at least those east of Chicago. According to my observation and information this package is not yet so well known in the west, but I feel sure that it is destined to be a favorite there.

The six-basket carrier consists of a crate approximately 14 inches deep, 14 inches wide, and 24 inches long. This is made of light slats nailed to two lightly framed end pieces. Inside this crate there are six small baskets without handles made of thin wood veneer, and each holding about a half peck of fruit. The entire crate, therefore, holds about three pecks, or a trifle over. The baskets are placed in the crate in two layers. First three baskets are put in and then a thin slat support is put on top of them, thus carrying the upper tier of three baskets without injuring the fruit below.

There are many advantages to this package. First, it is easily packed. Second, it carries the fruit in the most perfect condition of any package yet introduced into the general market. Third, it displays the fruit to great advantage when the package is opened in the market. Fourth, the little half-peck basket offers just about the quantity of fruit to tempt the average buyer. It is neat and handy to take home.

The six-basket carrier is used principally for peaches and plums, but is suitable for all fruits of that general nature. Mr. J. H. Hale has recently tried a slight modification of this package for shipping plums. He used nine shallow baskets in three tiers in place of the usual six baskets in two tiers. Mr. Hale and many other shippers, especially in Georgia and North and South Carolina use the same crate without any baskets for shipping muskmelons (which they persist in calling cantaloupes).

This package costs a trifle more than the old-fashioned peach and plum crate, or than the modern Delaware peach basket. The manufacturers have not quite settled down to a uniform price, but $10 to $15 a hundred is about the present quotation. The fact that the six-basket carrier costs more will make some shippers hesitate about adopting it. Poor fruit will not pay for the most expensive package. The better display which the six-basket carrier offers in the market is small advantage to wormy, bruised and rotting peaches. The carrier is, therefore, naturally a package for fancy fruit. It is especially desirable, too, for making long shipments. When it comes to shipping peaches from Kansas, Oklahoma and Texas to Chicago and Denver, the six-basket carrier is sure to find favor.

The Apiary

HOW HONEY IS MADE.

One writer on honey says: Whence comes honey? Some assert that it is a secretion of the bees, others that it is a natural product in plants. If it is a natural vegetable product, the laboratory would have furnished us long ago with genuine honey.

It must be remembered that the sugar and glucose that bees resort to in flowers and fruits is never honey until it has passed through the stomach of the bees; and please do not call this organ a "bladder," as some do, for it is virtually a stomach and performs the functions of that organ. The bee gathers into it a saccharine material.

After its reception a gastric element is mixed with it for two purposes, one to give it the character of honey, and the other to make it assimilative for the formation of an oil, that is, perfect wax.

It is generally supposed that, after a bee returns to its hive with its treasury, it hurriedly dumps it into a cell and goes out for another, but this is not the case. When the bee returns, because of fatigue and under the stupefying influence of digestion, it has to abide for a time, both to recuperate and to get rid of its burden of honey and wax.

We have reason to believe that, even after the honey is deposited in the cells, it has yet to receive the finishing touch of perfection, which in all probability is given by the younger bees of the colony. They live by the honey imported.

This rich, concentrated food demands an excess of gastric secretion. When coming to a certain point it creates a regurgitation, something akin to vomiting. This the young bee economically puts back into the cells, thus completing the process of honey-making.

EARLY AUTUMN MANAGEMENT.

Early management in autumn is much the best for successful wintering. Most people put off fixing bees up for winter until it is too late to make a good job of it, says A. H. Duff in "Kansas Farmer."

Preparing colonies for winter should be begun in September, and the entire work of putting them in winter shape complete—that is those that are to be wintered outdoors—may be done in this month.

Feeding is one of the first things to be done, if they need it; then put them in chaff hives, or they may be put in chaff hives before feeding. As to this it makes no difference.

Feeding is better begun the first of the month, and continued entirely through this month, and at the end of the same we have completed two things of much importance, and that is a supply of stores we sealed up and a good force of young bees in the hive. Late feeding does not near accomplish this, for we fail to get the young bees, and also fail to get the stores sealed up, either of which is of great importance.

It is best to feed lightly at first, and regularly, for about two weeks, as this gives the queen a chance to fill a well-formed brood nest with eggs, and the last two weeks feed as heavily as may be necessary to supply the required amount of stores. Colonies fed thus well in autumn will usually winter better than those not so fed, even if they have an oversupply of honey in the hive, for by feeding them now they will rear some brood that they would not otherwise do.

Late swarms, or weak colonies of any kind should be united before feeding is done, and this is the first thing to do, together with the removal of all surplus boxes from the hives. This will confine the bees to the brood chamber, and all the honey they may gather in autumn will be stored in the same for the use of the bees in winter. Far too many colonies go into winter quarters with a limited supply of stores, and while the expert may succeed in wintering with 20 or 25 pounds of honey to the colony, yet the ordinary farm beekeeper had better not risk less than 30 or 40 pounds. We should keep in mind that it takes as much, or more, to spring a colony of bees as it does to winter them, and the springing is of very great importance. Very early feeding in spring, before settled warm weather, is a difficult matter, and many would throw up the job in disgust. It is much better done in autumn, and will accomplish much more towards strong colonies in the spring.

Frequently we get a honey flow in autumn which enables the bees to fill up their hives, but more often we do not, and if one will note the difference when the bees come out in spring, they will readily see the advantage of the fall honey flow, or feeding, which answers the same purpose. Those who are interested in bees would do well to protect fall flowers that produce honey, and plant out the same, which will grow and do well in waste places where the most obnoxious weeds have possession. We know of no good honey-bearing plant that would prove a nuisance to any one, but which, on the other hand, would not be a benefit. Golden rod, asters, heartsease, and several other autumn honey-bearing plants, are only found in waste places where the land is not cultivated or pastured.

Buckwheat is of much advantage as a late honey plant. While bees do not gather any very great quantity of honey from it, yet it starts them to breeding, and they usually make a living out of it. Perhaps the best time to have buckwheat blooming is during September or October, in most localities, as it yields better when the weather is not so hot while in bloom. The nearer we can get the bloom to frost, and yet escape it, the better it is for buckwheat. Buckwheat honey is a strong dark honey, and is a wholesome honey for the bees to winter on, but it is not a ready seller, although some few prefer it. Buckwheat will not do much good in the dry, semi-arid districts of the west, as it needs plenty of moisture.

WINTERING BEES.

Bees are likely to go through the winter in good shape if they have a vigorous queen less than two years old. With a good queen there will be plenty of young bees coming out late in the fall. These late bred bees are the main dependence for the winter, writes Fannie M. Wood in the "Indiana Farmer." Bees that have gathered honey during the fall die of old age, before there are young bees to take their places. The queen must have bees to cover her eggs early in the spring. Then there must be plenty of young healthy bees in a hive to resist the severe cold of winter. A weak colony will chill past motion and die of starvation when they have plenty to live on. They cannot get to the stores when they become thoroughly chilled. The same thing will happen to a strong colony if it is not well protected. Bees should be examined early in the fall to see if every colony has bees enough. Put the weak ones together. It is bad policy to take away from strong ones at this season. The ones that are short of stores should be attended to before cold weather.

Feeding in early autumn encourages brood rearing. Late feeding will not produce this most desirable result. If the queen in any colony shows signs of failure she should be superseded before cold weather. The new queen will then begin laying and produce some young bees. The chaff cushions should be made of some porous material to prevent dampness. Bees must be kept dry and warm. They also require plenty of pure air, but drafts must be avoided. It is said the question of ventilation has been the cause of more discussion and experimentation than any other point concerned in the wintering of bees. One of the advantages of wintering bees in a dry cellar is the even temperature which agrees with them; another advantage is the saving of food. Not more than two-thirds as much needed to bring a colony through if conditions are favorable. They should be carried into the cellar after the first severe frost, or anyway after the first light freeze. The cellar must be very dark and cool, as light and warmth have a disturbing influence. If the bees remain quiet the temperature is not too high, but if they seem uneasy one may safely conclude that it is too warm for them. Too high a temperature will produce dysentery and other similar diseases. Experienced bee keepers consider 45 degrees a very safe temperature to be maintained. When the climate is warm enough for a flight every few weeks during the winter bees are better off out of doors. Indoor wintering is not recommended by veteran bee keepers, except in those parts of the country where the cold of winter is extreme and long continued. So few cellars are suitable for wintering bees. A part of the cellar should be partitioned off for the rise of the bees when possible under the living rooms. In wintering bees many things must be considered. Our success depends upon their successful wintering.

Live Stock

DATE CLAIMS FOR LIVE STOCK SALES.

Oct. 8.—F. M. & O. B. Cain and Jas. Novinger & Sons, Novinger, Mo., at Kirksville, Mo. Shorthorns.
Oct. 9.—A. Alexander and R. G. Robb & Son, Morning Sun, Iowa. Shorthorns.
Oct. 16-17, 1901—Estate G. W. Kennedy,
Oct. 25—National Galloway sale at Kansas City, under the auspices of the American Galloway Breeders' Association.
Douglas, Ill., Shorthorns.
Nov. 5-6.—B. O. Cowan, New Point, Mo., and W. T. & H. R. Clay, Plattsburg, Mo., at Kansas City. Shorthorns.
Nov. 5, 1901.—Combination sale Shorthorn Cattle, Sturgeon, Mo. J. J. Littrell, J. F. Keith and E. S. Stewart, Sturgeon, Mo., and J. H. Cottingham, of Clark, Mo.
Nov. 12-13.—Purdy Bros., Harris, Mo., and D. L. Dowdy & Co., Arrington, Kas., at Kansas City, Mo. Shorthorns.
Nov. 14-15.—Sale of Berkshire and Jersey cattle. Biltmore Farm Annual, Biltmore, N. C.
Nov. 19, 1901—I. A. Novinger & Sons, Shorthorns, Kirksville, Mo.
Dec. 10, 11, 12 and 13.—Kirk B. Armour and Jas. A. Funkhouser, at Kansas City. Hereford cattle.
Dec. 18.—C. D. Bellows, Maryville, Mo., at South Omaha. Shorthorns.
Dec. 18-19, 1901—Gudgell & Simpson, C. A. Stannard and Scott & March, Herefords, at Fort Worth, Tex.
January 28 to 31, 1902.—Sothams' annual Criterion Sale, at Kansas City.
Jan. 14, 15 and 16.—Cornish & Patten, Osborn, Mo., and others, at Kansas City, Mo. Hereford cattle.
Feb. 11-12, 1902.—Redhead Anisty, Boyles and others, at South Omaha, Neb. Hereford cattle.
March 6-7.—I. M. Forbes & Son, Henry, Ill.; J. F. Prather, Williamsville, Ill.; S. E. Prather & Son, Springfield, Ill.; C. B. Dustin & Son, Summer Hill, Ill.; T. J. Wornall, Mosby, Mo., and others, at Chicago, Ill. Shorthorns.
March 11.—W. P. Nichols, West Liberty, Iowa. Shorthorns.
June 19.—C. E. McLane, Danville, Ind., at Indianapolis. Double Standard Polled Durhams.
The "National Hereford Exchange" under management of T. F. B. Sotham, as follows:
Nov. 20-22, 1901.—East St. Louis.
March 25-27, 1902.—Chicago.
April 22-24, 1902.—Kansas City.
May 27-29, 1902.—Omaha.
June 24-26, 1902.—Chicago.

POLAND CHINAS.

Sale at Ill. State Fair Grounds, Springfield, Ill.
Oct. 7-11.—Kansas City Show and Sale.
Oct. 12.—R. T. Williams, Russellville, Mo.
Oct. 17, 18, 19, 21.—American Angora Goat Show and Sale, W. T. McIntire, Sec. and Manager, Stock Yards, Kansas City, Mo.
Oct. 21.—G. E. Leslie, Memphis, Mo.
Oct. 21.—E. E. Axline, Oak Grove, Mo.
Oct. 22.—J. T. Robinson, Bates City, Mo.
Oct. 24.—F. H. Schooler, Rockport, Mo.
Oct. 25.—W. N. Winn & Son, Kansas City, Mo.
Oct. 26.—T. H. Martin, Kansas City, Mo.
Oct. 28.—C. E. Pogue, Findlay, Ill.
Nov. 4.—J. W. William, Cisco, Ill.
Nov. 5.—H. O. Minnis, Edinburg, Il.
Nov. 6.—C. C. Brown, Heyworth, Ill.
Nov. 7.—D. J. Walters, Kumler, Ill.
Nov. 8.—W. R. Loveless, Gibson City, Ill.
Nov. 12.—A. G. Woodbury, Danville, Ill.
Nov. 13.—E. H. Wane, Douglas, Ill.
Nov. 14.—E. L. Jimison, Oneida, Ill.
Nov. 15.—W. J. McKibben, Garden Prairie, Ill.
Nov. 19.—Victor Wiley, Fuller, Ill.
Nov. 20.—H. G. Davis, Woodland, Ill.
Nov. 28.—J. B. Fink, Herborn, Ill.
Oct. 25—Kansas City, Mo. Galloway sale.

ABERDEEN ANGUS CATTLE.

Oct. 17-18—National sale, W. C. McGavock, mgr., Kansas City.
Dec. 3-6—International sale, W. C. McGavock, mgr., Chicago.
Feb. 4-6—Combination sale, W. C. McGavock, mgr., Chicago.
April 10-11—Combination sale, W. C. McGavock, mgr., Kansas City.
June 10-11—Combination sale, W. C. McGavock, mgr., Chicago.

NATIONAL SHORTHORN SHOWS AND SALES.

Oct. 16-25—Kansas City, Mo.
Nov. 15.—Kansas City, Mo.; Messrs. B. B. and H. T. Grooms of Staked Plains Farm of Panhandle, Tex.
Nov. 7.—At Sturgeon, Mo.; by Messrs, J. J. Littrell, Dr. J. F. Keith, E. S. Stewart, all of Sturgeon, and J. H. Cottingham of Clark, Mo.
Dec. 2-7—Chicago, Ill.
Dec. 5-6—Chicago.

NATIONAL HEREFORD SHOWS.

Oct. 16-25—Kansas City, Mo.
Dec. 2-7—Chicago, Ill.

NATIONAL HEREFORD SALES.

Oct. 22-23-24—Kansas City, Mo.
Dec. 3-4—Chicago.

CATTLE KING RANKIN'S PLAN.

St. Joseph, Mo., Sept. 29.—The heavy rush of cattle to the live stock markets from all points in the West has been unprecedented this fall. But if the ideas of David Rankin, the Western cattle king, are generally accepted, the rush may abate at some time in the near future. Mr. Rankin while in the city to-day said he never had placed upon the market live stock that was not fit to command somewhere near top prices. This he proposes to do the present fall and winter, notwithstanding the fact that feed of the ordinary sort is considered entirely too expensive to warrant any experiment. He says he will feed for the markets of the present and coming year with as much confidence in handsome profits as he ever has in his life. Briefly stated, Mr. Rankin has just ordered 1,000 tons of cottonseed meal from points in Texas. This will constitute the principal ingredient of a cattle food which will not only take the place of corn, but which will put a superior quality of meat upon the bones of live stock in a much shorter time than corn could possibly do.

Mr. Rankin is not only known as one of the greatest cattle-kings, but he is in addition the greatest farmer in the world. His home is in Tarkio, Mo., and in the vicinity he actually farms more than 100,000 acres of the finest agricultural soil to be found in the Platte purchase. The present fall and coming winter Mr. Rankin will probably feed in the neighborhood of 20,000 head of cattle.

It is a matter of remark that during the next few months feeders will draw both cattle and feed from the great Southwestern state of Texas, a thing never done before.

F. W. SIMPSON of Nugent, Kentucky, opened the Louisville Hereford sale by getting the bull, Earl of Claremont 4th, at $1,025. The animal was owned in the Blue Grass State and Mr. Simpson did not propose to let him get out of Old Kentucky.—Live Stock World.

KIRKLAND B. ARMOUR DEAD.

Live stock dealers throughout the United States will be pained to learn of the death of Kirkland B. Armour, which occurred at his home in Kansas City last Friday, Sept. 27. Mr. Armour was only 47 years old, and in the comparatively few years that he has given to the pure bred cattle business he had taken high rank as a breeder and importer of Hereford cattle. Had he been spared to a reasonable age it would seem as if in the next 20 or 25 years he would have done the pure bred cattle interests of this country incalculable good.

Mr. Armour was born at Stockbridge, N. Y., in 1854. He was the son of Andrew Watson Armour, who was for many years conspicuously identified with the Armour interests in Kansas City, and entered the packing house firm in 1872. After the death of his father he was made vice-president and general manager of the Kansas City branch, and upon the death, in 1896, of S. B. Armour, he succeeded to the presidency. He was in the directories of half a dozen Kansas City concerns.

Mr. Armour had on his farm, near Kansas City, some of the finest stock in the United States, included among them being many importations from the English royal herd. He was twice president of the National Hereford Breeders' Association. Mr. Armour leaves a widow and three children.

LIVE STOCK SANITARY BOARDS

To Meet in Buffalo, N. Y., October 8.

Dr. D. F. Luckey, Missouri State Veterinarian and President Western Association Live Stock Sanitary Boards, calls attention to the meeting of the Interstate, Association of Live Stock Sanitary Boards, which will be held in Buffalo, N. Y., October 8, and urges the importance of a large attendance. He says:

It is a duty that the members of the Sanitary Commissions of the different states owe to the live stock interests to get together and study out the simplest and most effective methods of controlling outbreaks of contagious diseases among live stock, methods which can be adopted without unnecessarily interfering with the natural movement of stock. Heretofore the quarantine regulations for controlling Texas fever adopted by the sanitary boards of the different states and by the Bureau of Animal Industry have shown a great lack of uniformity, and on that account have occasioned a good deal of unnecessary confusion, delay and expense to live stock shippers and transportation companies. By working together a little better the sanitary boards can avoid all of this.

Valuable papers will be read at this meeting on the different contagious diseases of live stock. A proper understanding of these diseases will be a great help to those who are authorized to make quarantine regulations for controlling them. Members of sanitary boards will never have a better opportunity to hear able discussions of the different contagious diseases of live stock than will be afforded at this meeting.

PAVILION IS UNDER ROOF.

New House for Fancy Cattle Is Nearing Completion—1,200 Cattle Are Coming to the Great Cattle Show at Kansas City.

The new fancy stock pavilion at Nineteenth and Genesse streets is being pushed to completion by the stock yards company as rapidly as a large force of carpenters, roofers, electricians and painters can do the work. While the roofers are putting the finishing touches upon the immense expanse of roof which practically covers half a block of ground, carpenters are putting in place the stalls and boxes, and electricians are stringing thousands of feet of wire for the myriad of incandescent lights with which the gigantic structure will be lighted at night. The management is well satisfied with the progress being made, there being plenty of time before October 21, the opening day of the show, to put everything in shape for visitors.

The new barn will be a model of convenience in every respect. It will be thoroughly lighted by day, and at all times thoroughly ventilated by large sliding panels of glass which form fully one-half of the sides and ends of the structure. The centers will receive a flood of light from the hundreds of panes of glass in the "Texas" on the roof. The stalls are large and roomy, and the passageway between them wide, giving every facility possible for viewing the animals.

Traffic Manager Rust of the stock yards company, was at the Missouri State Fair at Sedalia, and there met many of the leading breeders of Herefords, Shorthorn and Galloway cattle of the West. He said to-day that there was every indication that the display of cattle at the great American Royal Show and sale to be held here October 21 to 26, would be the finest ever seen in this country.

"There will be fully 1,200 head of the best animals of the three breeds to be found in the country," Mr. Rust said. "I found the breeders all enthusiastic over the outlook for the show and sale, and all confident that it would be a great success."

The railroads have agreed to return free of charge all animals sent here for show. The question of passenger rates has not yet been definitely settled. A rate of one and one-third fare on the certificate plan has been assured, but it is hoped that a better rate than this will be granted by the railroads.—Drovers' Telegram.

PAN-AMERICAN STOCK NOTES.

The largest bull at the Pan-American is a Shorthorn that weighs 2,700 pounds. The smallest full-grown animal is a French-Canadian cow and she weighs less than 400 pounds. Between these extremes are all sizes, but only one quality and that is the best and most valuable that the continent affords.

The fattest cattle at the Pan-American are the Polled Durhams owned by J. H. Miller of Peru, Ind. Several of these weigh a ton each, and they are as fat as butter.

Perhaps the oddest feature of the Pan-American Cattle Show is a consignment of wild range steers direct from the Canadian Northwest. They are sent as an advertisement of what can be accomplished in that country without shelter or additional feed. Some of these animals are plenty fat enough for beef, and they are all large and heavy. Their weight will range from 1,300 to 1,800 pounds each. Cowboys accompanied them with their plains outfit of ponies and lassoes, but they deemed it necessary to build a wire corrall to extend from the cars to the enclosures as they could afford to take no chances with such wild stock.

Superintendent Converse has been about the busiest man in Western New York during the past week. He accepted entries for cattle until every available space in the 16 stock buildings was crowded to its utmost capacity. To accommodate entries still further canvas was stretched along the sides of the buildings and temporary accommodations furnished in this manner to provide for the overflow. With all this preparation, however, the limit was reached long before the supply was exhausted, and many disappointed stockmen were left out. In many respects the Pan-American Cattle Show has been the most important ever held. The best cattlemen of the country are unanimous on this score, and it is the universal opinion that the Pan-American Cattle Show will be referred to as establishing standards for years to come.

STOCK NOTES.

J. H. MILLER, Peru, Ind., took all the awards on Polled Durhams at the Pan-American Exposition.

CHARLES SINNARD of Carrollton, Mo., was on the Kansas City market last week with 51 black cattle which weighed 1,340 pounds, and sold to Schwarzschild & Sulzberger at $6.30. These cattle had been fed by John W. Bailey since last January and showed unusual good care and attention. Mr. Bailey is one of the most prominent feeders of Carroll County.—Telegram.

CORRECTIONS.—In the report of the cattle awards at the Missouri State Fair a mistake was made in stating that the first prize on two-year-old Shorthorns bull went to T. J. Wornall. It was awarded to Geo. Bothwell on imp. Black Watch.

In the list of awards on jacks, a mistake was made in an owner's name. It should have been Geo. H. Rider & Son, Dumpville, Mo., not Riderphen, as printed.

THE LOUISVILLE, KY., INTER-STATE FAIR, held Sept. 23 to 28, had a splendid live stock exhibition, for which the Kentucky Live Stock Breeders' Association deserves much credit for their untiring efforts in that direction. The association is composed of the following breeders of the state: T. L. Hornsby, Eminence, president; John G. Roach, Louisville, vice-president; J. L. Ormsby, Louisville, treasurer; M. W. Neal, Louisville, secretary. Directors are: W. H. Giltnuer, Eminence; Caldwell Norton, Louisville; R. M. Smith, Shelbyville; Gottlieb Letterle, Harrods Creek; G. N. Lydden, Webster; L. L. Dorsey, Amhorage; E. W. Sewell, Lyndon; E. N. Hieatt, Eminence; Geo. C. Bird, Cropper; B. B. Stith, Elizabethtown; and A. Birch, Louisville.

THE CATTLE SHOW AND SALE

At Louisville, Ky.

The Hereford and Shorthorn show and sale at the Interstate Fair, Louisville, Ky., last week were quite successful. Following are the awards:

HEREFORDS—Bull, 3 years old or over—First, Gudgell & Simpson, Independence, Mo., with Dandy Rex 71689; second, T. F. B. Sotham, Chillicothe, Mo., with Improver 94020; third, W. H. Curtice, Eminence, Ky., with Prince Rupert 79539; fourth, T. F. B. Sotham, with Bequeather 93977; fifth, Steward & Hutcheon, Greenwood, Mo., with Idaho 81770.

Bull, 2 years old and under 3—First, O. Harris, Harris, Mo., Lomax 89993; second, same with Premier 94208; third, T. F. B. Sotham, Checkmate 93981; fourth, Joe C. Grady, Versailles, Ky., Beau Donald 5th 86142; fifth, Hornsby Bros., Eminence, Ky., Beau Rowland 102767.

Bulls 1 year old and under 2—First, T. F. B. Sotham, Thickflesh 107743; second, Gudgell & Simpson, Martinet 109801; third, W. H. Curtice, Beau Donald 27th 105167; fourth, C. N. Moon, Lees Summitt, Mo., Cassio 2d 108565; fifth, Geo. P. Henry, Goodenow, Ill., Prime Lad 108911; sixth, T. F. B. Sotham, March On 13th 106675; seventh, H. D. Martin, Shelbyville, Ky., Beau Donald 37th 109869; eighth, Gudgell & Simpson, Donovan 109836.

Bulls six months old and under one year—First, O. Harris, Good Enough 3d 119984; second, Gudgell & Simpson, Paladin 126248; third, same, Belisarius 126243; fourth, O. Harris, Burke 119933; fifth, Steward & Hutcheon, King Dix 120832; sixth, T. F. B. Sotham, Loadster 120191; seventh, W. H. Curtice, Beau Donald 39th 121457; eighth, same, Beau Donald 40th 121458.

Bull calf under six months old—First, Gudgell & Simpson, Bright Donald 128131; second, T. F. B. Sotham, Peritan 120797; third, Gudgell & Simpson, Vigilant 126250; fourth, O. Harris, Marcus 124095; fifth, W. H. Curtice, Beau Donald 49th 125466; sixth, Geo. P. Henry, Blushing Lad 2d 124541.

Cows, three years old or over—First, O. Harris, Betty; second, Gudgell & Simpson, Mischievous; third, T. F. B. Sotham, Pure Gold; fourth, Geo. P. Henry, Blush; fifth, Giltner Bros., Diana.

Cows or heifers, two years and under three—First, T. F. B. Sotham, Golden Lassie; second, Gudgell & Simpson, Modesty; third, O. Harris, Theressa; fourth, H. F. Schneiker, New Haven, Ind., Nadas Jewel.

Heifer, 18 months old and under two years—First, Gudgell & Simpson, Independence, Mo., Miss Caprice; second, O. Harris, Harris, Mo., Lady Dewdrop; third, Gudgell & Simpson, Honora 3d; fourth, Steward & Hutcheon, Greenwood, Mo., Queenly; fifth, T. F. B. Sotham, Chillicothe, Mo., Nanette; sixth, O. Harris, Silver Cup; seventh, Steward & Hutcheon, Pretty Lass; eighth, T. F. B. Sotham, Galatea.

Heifer, 12 months old and under 18 months—First, O. Harris, Kasail 3d; second, Gudgell & Simpson, Silver Lining; third, Steward & Hutcheon, Tempter's Queen; fourth, Gudgell & Simpson, Gipsy Lady; fifth, Steward & Hutcheon, Matilda; sixth, T. F. B. Sotham, Improver's Coral; seventh, Walter B. Waddell, Lexington, Mo., Berrington 6th; eighth, H. F. Schneiker, New Haven, Ind., Savilla.

Heifer, six months old and under 12, 17 entries—Lucille II., 119938; Troublesome 119946, and Lady Good Saxon 119937, all owned by O. Harris, first, second and third; Rosella II., 126249, and Donna X. 126245, and Modesty III. 126247, all owned by Gudgell & Simpson, fourth, fifth and sixth; Princess Pearl 120196, T. F. B. Sotham, seventh; Blonchesse II. 126244, Gudgell & Simpson, eighth.

Heifer, under six months old, seven entries—Madge 126274, Steward & Hutcheon, first; Belle Donald 56th 121479, W. H. Curtice, Eminence, second; Betty III. 124092, O. Harris, third; Kassie IV. 119986, O. Harris, fourth; Benign 125764, T. F. B. Sotham, fifth; Gypsy Lady II. 126246, Gudgell & Simpson, sixth; Kitty Clover 121243, Giltner Bros., Eminence, Ky., seventh.

Senior sweepstakes, bull, two years old and over, four entries—Dandy Rex 71689, Gudgell & Simpson.

SHORTHORNS—Bulls, three years or over—First, J. G. Robbins & Son, The Lad for Me; second, E. W. Bowen, Orange Chief; third, H. A. Brewer, Eminence, Ky., Pride of Scotland; fourth, John G. Roach, Louisville, Ky., Valhalla; fifth, Vaumeter Bros., Lexington, Ky., English Marshall; sixth, Wm. & R. L. Simmons, Shepardville, Ky., Estill.

Bulls, two years, under three—First, George Harding & Son, Golden Victor; second, E. R. Barby, Master Archer; third, George Bothwell, Nettleton, Mo., Black Watch; fourth, A. H. Mason, Harrods Creek, Ky., Sittyton Flash; fifth, Goddard Grundy, Valley Hill, Ky., Goebel; sixth, Frank G. Hogan, O'Bannon, Ky., Brawirth Laird.

Bulls, one year old or under—First, Geo. Bothwell, Nonpareil of Clover; second, J. G. Robbins & Son, Lodestone; third, A. Renick, The Admiral; fourth, Goddard Grundy, Red Jumbo; fifth, Adair & Ewalt, Paris, Ky., Cross Roads Duke; sixth, same, Red Cross.

Bulls six months and under one year—First, Geo. Bothwell, Nonpareil Hero; second, Geo. Harding & Son, Royal Archer; third, E. B. Bagby, Archer's Sycamore; fourth, J. G. Robbins & Son, Bud Means; fifth, J. A. Gerlaugh, Harshman, Ohio, Marston; sixth, S. S. Ormsby, Lakeland, Ky., Scotch Admiral; seventh, A. Renick, Rear Admiral; eighth, S. S. Ormsby, Bellvoir Lavender.

Bull, calves under six months—First, Geo. Harding & Son, Ceremonous Archer; second, Geo. Bothwell, Grand Violet Victor; third, J. G. Robbins & Son, Spicy Lad; fourth, E. R. Bagby, Minnie Archer; fifth, W. H. Durrett, Ormond.

Aged cows—First, Harding & Son, Rose Princess; second, J. G. Robbins & Son, Young Matchless; third, E. W. Bowen, Delphi, Ind., Stella; fourth, A. Renick, Sycamore, Ky., Minnie 30th; fifth, E. R. Bagley, Bowling Green, Ky., Lady Abbottsburn.

Cows, two years old, under three—First, J. G. Robbins & Son, Ruberta; second, George Harding & Son, Rose of Autumn; third, E. W. Brown, Missie 165; fourth, Wm. Darrett, Crittenden, Ky., Village Rose; fifth, George Harding & Son, Nonpareil 47th; sixth and seventh, Renick, Rosebud and Poppy 92d; eighth, E. R. Bagley, Cambridge.

Heifers, 18 months and under two years—First, Harding & Son, Golden Fames Belle; second, Geo. Bothwell, Nonpareil; third, same; fourth, E. W. Bowen, Mayflower 19th; fifth, Geo. Bothwell, Wild Eyes Victoria 3d; sixth, Adair & Ewalt, Duchess May 11th; seventh, A. Renick 12th, Rose of Sycamore; eighth, same, Rosebud 66th.

Yearling heifers—First, J. G. Robbins & Sons, Clarissa; second, same, Oneida; third, Peake & Son, White Rose; fourth, E. W. Bowen, Vain Beauty; fifth, J. L. Gerlaugh, Jessica; sixth, Howaly Bros., Princess D.; seventh, same, Belle Rose; eighth, J. G. Roach, Lady Whiteside.

Senior heifer calves—First, Geo. Bothwell, Queen of Beauty; second, Harding & Son, Gloster Girl; third, J. G. Robbins, Lad's Laddy; fourth, same, Golden Lassie; fifth, E. W. Bowen, Vanity; sixth, J. G. Robbins, Lad's Goldie; seventh, Goldie; seventh, George Bothwell, Wilhelmina; eighth, same, Breeders' Dream.

Junior heifer calves—First, J. G. Robbins, Lady Rose; second and third, Harding & Son, Phyllis and Village Princess; fourth, G. Letterle & Son, Harrod's Creek, Ky., Pure Gold; fifth, W. H. Durrett, Rose of Geneva.

Senior sweepstakes—There were sixteen entries in this class, including Stella, Lady Abbotsburn, Ruberta and Nonpareil 47. The first prize was awarded to J. G. Robbins & Sons.

Junior sweepstakes—Clarissa, the property of J. G. Robbins & Sons, was awarded the first prize in this class over eight competitors.

In the grand sweepstakes Golden Victor, the property of Harding & Sons of Waukesha, Wis., was the only entry and it was awarded the first prize.

In the grand sweepstakes between Ruberta and Clarissa, both the property of J. G. Robbins & Sons, Ruberta was awarded the premium.

Aged herd—In this class there were fifteen entries and the herd of George Harding & Son, of Waukesha, Wis., won the first prize; the herd of J. G. Robbins & Sons of Horace, Ind., second; the herd of E. W. Bowen of Delphi, third.

Young herd—There were five entries in this class and the herd of George Bothwell won the first prize; the herd of J. G. Robbins & Son, second; the herd of A. Renick, third.

Calf herd—There were four entries in this class, and the first prize was awarded to George Bothwell; J. G. Robbins & Sons, second; George Harding & Sons, third.

Groups—There were seven groups and the first prize was awarded to George Harding & Sons; second to George Bothwell; third to J. G. Robbins & Sons; fourth to A. Renick.

In the second group there were six exhibitors. The first prize went to George Bothwell; J. G. Robbins & Sons, second; George Bothwell, third; George Harding & Sons, fourth; A. Renick, fifth.

THE SALES.

HEREFORD—Earl of Carlemont 4th 112460, calved July 20, 1900; sire Acrobat 68460. Consigned by W. H. Giltner. Sold to F. W. Simpson, Nugent, Ky., $1,025.

Baron Victor 1st 106618, calved Oct. 30, 1899; sire, Baron Victor 52573. Consigned by H. Ley. Sold to W. E. Hemmingway, Steward, Ill., $150.

Good Boy 112083, calved June 13, 1900; sire, Goodenough 76811. Consigned by O. Harris. Sold to O. H. Christy, Phoenix, Ariz., $300.

Hesoid Briton 120134, calved Nov. 16, 1900; sire, Hesiod 56th 86487. Consigned by Walter B. Waddell. Sold to M. D. Mills, Palestine, Ill., $265.

Earldoff 124862, calved Nov. 2, 1900; sire, Prosperity 87100. Consigned by Hornsby Bros. Sold to T. C. Giltner, Eminence, Ky., $160.

Doty Lee 2d 108350, calved Sept. 29, 1899; sire, Boatman 56011. Consigned by Gudgell & Simpson. Sold to Giltner Bros., Eminence, Ky., $260.

Armour Carnation 90064, calved May 5, 1899; sire, Beau Brummel, Jr. 65073. Consigned by K. B. Armour. Sold to M. D. Mills, Palestine, Ill., $330.

Florence 105995, calved Jan. 10, 1900; sire, Rover 64226. Consigned by F. C. Giltner. Sold to Geo. Hall, Macksburg, O., $350.

Lady Wellsly 3d 103460, calved Feb. 19, 1900; sire, Keep On 76015. Consigned by C. A. Stannard. Sold to Avery & Hines, Alto Pass, Ill., $210.

Florence H. 87008, calved June 5, 1898; sire, Wilton Grove 66851. Consigned by S. W. Anderson. Sold to M. D. Mills, Palestine, Ill., $200.

Miss Valentine 77315, calved Feb. 14, 1897; sire, Jumbo 54521. Consigned by D. C. Stayton. Sold to C. F. & L. P. Crider, Henderson, Ky., $125.

Blossom 68206, calved April 2, 1896; sire, Bloom 47075. Consigned by W. H. Curtice. Sold to B. F. Agness, Converse, Ind., $260.

Waverly Girl, 94230, calved June 4, 1899; sire, Archibald V. 54433. Consigned by A. C. Stannard. Sold to Avery & Hines, Alto Pass, Ill., $700.

Amelia 127850, calved Nov. 6, 1900; sire, Prosperity 87110. Consigned by Hornsby Bros. Sold to Avery & Hines, Alto Pass, Ill., $210.

Follow Me 119540, calved Oct. 7, 1900; sire, Kansas Lad, Jr., 75104. Consigned by Geo. P. Henry. Sold to M. D. Mills, Palestine, Ill., $220.

Little Jewel 6th 114779, calved Sept. 10, 1900; sire, Hesiod 03th 66305. Consigned by K. B. Armour. Sold to M. D. Mills, Palestine, Ill., $210.

Cornweed 111779, calved Feb. 3, 1897; sire, Prince Richard 81555. Consigned by K. B. Armour. Sold to Hornsby Bros., Eminence, Ky., $360.

Sweet Marie 93842, calved March 25, 1899; sire, Banker 88608. Consigned by C. A. Jamison. Sold to Giltner Bros., Eminence, Ky., $305.

Cactus Girl 108564, calved April 4, 1900; sire, Cassino 79125. Consigned by C. N. Moore. Sold to Avery & Hines, Alto Pass, Ill., $200.

Jeannette 124863, calved Nov. 6, 1900; sire, Prosperity 87110. Consigned by Hornsby Bros. Sold to Giltner Bros., Eminence, Ky., $245.

Margie Well Done 102753, calved Jan. 2, 1900; sire, Well Done 68786. Consigned by W. H. Giltner. Sold to C. A. Jamison, Peoria, Ill., $400.

Sir Carroll's Early Princess 2d 65942, calved June 12, 1896; sire, Breckenridge 56104, and c. c. Consigned by Joe O'Graddy. Sold to Avery & Hines, Alto Pass, Ill., $265.

Murmur 73660, calved March 6, 1897; sire, Acrobat 68.046 Consigned by C. A. Jamison. Sold to Mrs. W. H. Giltner, Eminence, Ky., $800.

Pepper 108561, calved July 13, 1900; sire, Idaho 81770. Consigned by Steward & Hutcheon. Sold to Avery & Hines, Alto Pass., Ill., $125.

Pretty Lass, cow, calved Oct. 30, 1900. Mrs. Florence Curtice, Eminence, Ky., $415.

Virginia, cow, calved July 13, 1899. Avery & Hines, Alto Pass, Ill., $195.

Miss Horner, cow, calved May 25, 1896. F. E. Maxwell, West Union, W. Va., $750.

Diana, cow, calved May 17, 1896. S. L. Wright, Paris Crossing, Ind., $365.

Lindsy, bull, calved Sept. 5, 1899. C. A. Stannard, Emporia, Kansas, $100.

Lucky Boy, bull, calved Oct. 3, 1899. S. E. DeHaven, LaGrange, Ky., $130.

Juaneta, cow, calved December 10, 1899. O. Harris, Harris, Mo., $125.

Preference 3d, cow, calved June 13, 1896. Giltner Bros., Eminence, Ky., $260.

Sorcette, cow, calved Nov. 8, 1899. Giltner Bros., Eminence, Ky., $250.

Topsy, cow, calved Sept. 11, 1900. Avery & Hines, Alto Pass, Ill., $115.

Dewdrop, cow, calved Feb. 15, 1900. B. F. Agnews, Converse, Ind., $150.

Lillian, cow, calved June 18, 1897. M. D. Mills, Palestine, Ill., $225.

Miss Kohn, cow, calved April 5, 1896. J. H. Wilson, Eminence, Ky., $205.

Pandora, cow, calved Nov. 7, 1899. G. N. Lydan, Irvington, Ky., $210.

Keep On 7th, bull, calved June 22, 1900. Gudgell & Simpson, Independence, Missouri, $195.

Berrington 6th, cow, calved April 23, 1900. M. D. Mills, Palestine, Ill., $300.

Queen of Bluff Road, cow, calved Sept. 10, 1899. R. L. Paddock, Indianapolis, Ind., $200.

Reba, cow, calved July 22, 1899. J. F. Bowman, Edinburg, Ind., $160.

Charlie Rupert, bull, calved Nov. 29, 1900. J. K. Wilson, Meit, Va., $150.

Diamond, bull, calved October 29, 1899. O. H. Christy, Phoenix, Ariz., $130.

Fairy Queen, cow, calved Jan. 3, 1900. S. L. Wright, Paris, Ind., $310.

Briton 13th, bull, calved June 1, 1900. W. D. Gilly, Pennington Gap, Va., $130.

Ruthless Lad, bull, calved Sept. 22, 1900. R. L. Paddock, Indianapolis, Ind., $170.

Hazel Lass, cow, calved Dec. 16, 1899. F. W. Simpson, Nugent, Ky., $250.

Blush, cow and bull calf, calved Feb. 24, 1895. D. W. Black, Linden, Ohio, $600.

Jack Philips, bull, calved Oct. 4, 1899. C. A. Stannard, Emporia, Kas., $155.

Editor, bull, calved July 14, 1900. C. A. Stannard, Emporia, Kas., $205.

Rena C., cow, calved Sept. 23, 1900. P. C. Green & Bros., Kenna, W. Va., $130.

Bellflower, cow, calved April 10, 1900. G. W. King, Pennington Gap, Va., $100.

Gamster Miss, cow, calved April 13, 1898. B. F. Agnews, Converse, Ind., $400.

Donovan, bull, calved April 12, 1900. C. G. Comstock, Albany, Mo., $310.

Narcissus, cow, calved Nov. 3, 1899. F. E. Maxwell, West Union, W. Va., $250.

Jinks, cow, calved Nov. 14, 1900. C. A. Stannard, Emporia, Kansas, $195.

Beau Donald 83, bull, calved Feb. 15, 1900. A. C. Huxley, Paragon, Ind., $2,000.

Sprite 15th, cow, calved Aug. 13, 1899. S. W. Anderson, Asbury, W. Va., $350.

Lady of Carlmont 4th, cow, bred by Giltner Bros. M. D. Mills, Palestine, Illinois, $305.

Lala, cow, calved May 19, 1899. M. D. Mills, Palestine, Ill., $200.

Cracker Neck, bull, calved May 6, 1900. C. A. Stannard, Emporia, Kas., $100.

Empress, cow, calved Sept. 11, 1900. M. D. Mills, Palestine, Ill., $150.

Miss Dell, cow, calved Feb. 3, 1900. Avery & Hines, Alto Pass, Ill., $505.

Rosebud, cow and cow calf, calved Feb. 15, 1899. A. H. Clore, Skylight, Ky., $315.

Average of the two days was as follows: Sixty-five head, $19,450; average, $306.

SHORTHORNS—Lady Bell Seventh, red and white cow, calved Jan. 25, 1900. J. A. Gerlaugh, Harshman, Ohio, $475.

Lady Abbotsburn, roan cow, calved April 4, 1896. Geo. Harding & Son, Waukesha, Wis., $610.

Oakwood Daisy, red cow and bull calf, calved Sept. 25, 1895. W. A. Craveson, Clark Station, Ky., $300.

Strawberry of Maple Grove Second, red cow, little white, calved June 13, 1891. J. H. Moore, Danville, Ky., $140.

Cross Roads Duke, red bull, calved Jan. 5, 1900. Wm. Offitt, Georgetown, Ky., $100.

Roan Hattie, roan cow, calved Feb. 14, 1900. Taggart Bros., Vesta Ind., $170.

Lucille Eighth, red cow, calved Oct. 9, 1896. J. H. Steiner, Cataract, Ind., $290.

British Rose, red cow, calved May 18, 1899. Geo. Harding & Son, Waukesha, Wis., 115.

Princess D., red cow, calved June 17, 1900. Frank Hagan, O'Bannnon, Ky., $155.

Irene, red cow, calved June 5, 1900. John Roach, Louisville, Ky., $95.

Bellvoir Lavender, red bull, calved Sept. 19, 1900. Chas. Smith, Hillbill, Ky., $150.

Rose of Bellvoir, red cow, calved Sept. 19, 1900. Mrs. F. J. Hagan, Louisville, Ky., $105.

Minnehaha, red cow, calved Dec. 9, 1899. F. J. Hagan, Louisville, Ky., $120.

Bird's Nest Rose Fifth, red cow, calved April 16, 1900. J. C. Shropshire, Montrose, Ky., $70.

Village Master, red bull, calved April 17, 1900. Geo. Harding & Son, $100.

Forest Belle Seventh, red cow, calved Dec. 1, 1897. Geo. Harding & Son, $205.

Scottish Admiral, red and white bull, calved October 23, 1900. T. R. Davis, Nicholasville, Ky., $100.

Princess Otie Second, red cow, calved Aug. 19, 1900. T. W. Urton, Elizabeth, Ind., $135.

Minnie Twenty-Eighth, red cow and bull calf, calved Oct. 14, 1896. Geo. Harding & Son, $430.

Montrose, red cow, calved Feb. 25, 1899. J. H. Moore, Danville, Ky., $145.

Letetia Second, red cow, calved Oct. 10, 1897. J. H. Moore, Danville, Ky., $180.

Ruth M., red cow, with star, calved Sept. 4, 1900. Mrs. Frank Hagan, Louisville, Ky., $145.

Eva Wellington Fourth, red cow, calved Sept. 11, 1899. W. A. Fossett, Bardstown, Ky., $145.

Goebel, red bull, calved May 21, 1899. Olander Johnson, Louisville, Ky., $85.

Cypress of Stockland, red cow, calved October 23, 1899. Geo. Harding & Son, $135.

Enfield, red, little white, calved Aug. 21, 1900. Geo. Harding & Son, $75.

Miss Louise, red cow, calved May 12, 1899. J. H. Moore, Danville, Ky., $200.

Duke of Drennon Fifth, red bull, calved December 12, 1900. Ballard Bros., English, Ind., $100.

Third Princess Elizabeth, red and white cow, calved May 1, 1899. J. H. Moore, Danville, Ky., $125.

Rose Cannondale Second, red cow, with star, calved June 6, 1900. Mrs. F. Hagan, Louisville, Ky., $75.

Estill, red bull, little white, calved April 11, 1897. W. L. Trottman, Shepherdsville, Ky., $75.

Marston, red bull, calved Sept. 13, 1900. Taggart Bros., Vesta, Ind., $325.

Jessica, dark roan, calved May 13, 1900. Mrs. Frank Harding, Waukesha, Wis., $455.

Rosebud Sixty-Seventh, red cow, calved April 4, 1900. Will Robb, Winchester, Ky., $170.

Cambridge Rose, red cow and cow calf, calved Sept. 26, 1898. Frank Hogan, O'Bannon, Ky., $300.

Archer's Sycamore, roan bull, calved Dec. 22, 1900. Geo. Harding & Son, $100.

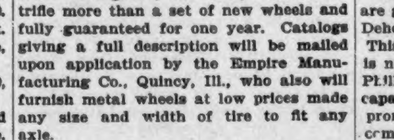
Rose Archer Third, roan cow, calved Nov. 26, 1900. Geo. Harding & Son, $125.

The following shows averages made during the sale:

Thirty-seven head, total, $6,835; average, $184.59. Twenty-eight females, total, $5,700; average per head, $203.57; nine males, total, $1,135; average per head, $126.11.

FARM WAGON FOR $21.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30 inch wheels with four-inch tire, and sold for only $21.95.



This wgaon is made of the best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogs giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

The gap, always wide enough, between fat cattle and common stuff, is growing wider.

THE KEYSTONE DEHORNER.—We are glad to notice the ad. of the Keystone Dehorning Knife elsewhere in this issue. This invention of the late A. C. Brosius is now manufactured and sold by M. T. Phillips at Pomeroy, Pa., where increased capacity and facilities permit of the prompt filling of all orders. There is coming to be a more intelligent understanding of the advantages of dehorning cattle Write the manufacturers for circulars and prices and mention this paper.

Horseman

Good horses are so scarce right at present that many export dealers are confining themselves to the home trade. It does not pay to export horses that will yield a sure profit in New York, Boston or Buffalo. Poor horses are not wanted, at any price, and lose the shipper money every time he touches them.

We are pleased to learn that Mr. J. B. Buck of Bloomfield, Mo., has become the owner of Correggio 32140. He was bred by Brook Curry of Lexington, Ky., was foaled in 1898, sired by Ashland Wilkes and his dam was Narka, by Anteeo 7868, son of Electioneer. Correggio is blood bay, 15.3 hands, and is said to be a horse of fine style and action.

The British officers in command of the agency in this country for the purchase and shipment of mules and horses to the British army in South Africa, report that they have sent to Cape Town 109 cargoes, consisting of 115,690 mules and horses, about equally divided between the two, the animals costing $11,546,615. The provisions for the trips to Africa brought the total cost up to $15,000,000.

Only two Adbells have been trained and started in races, viz.: Adabella, 2:25¼, winner of the two-year-old stake at Readville, and Rowellan, 2:15¼, winner of the Horse Review $6,000 stake at Hartford last week. Rowellan has been timed the last half of a winning heat in 1:04. Adabella having no engagements this year, has been worked lightly, but C. H. Baldwin drove her an easy mile the other day at Glen Falls in 2:17¼. These are simply forerunners of Abdell's quality as a sire.

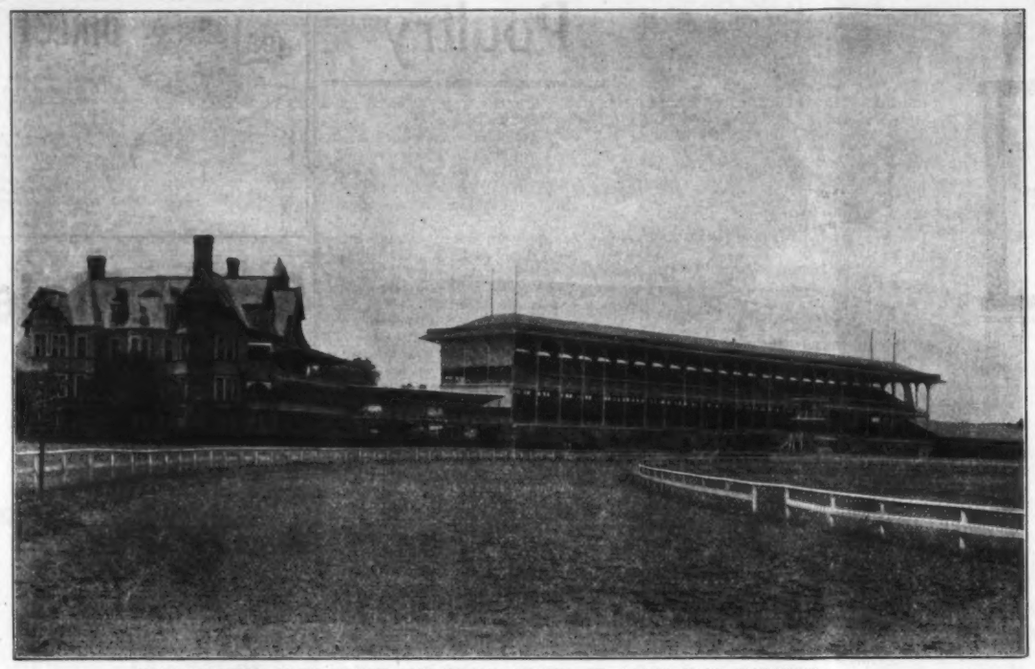
Again the buckskin gelding, Linsign, by Ensign, has demonstrated his superior trotting qualities over the horses of France and Switzerland. At the August meeting held at Morges, August 11th, Mons. Lizon, owner and driver of Linsign, won the first prize of 500 francs, an object of art and diploma, by defeating Picotin and Jaculor over a 3,500 metre course, with a 150 metre handicap, for the American trotter. He not only won the race, but led at the post by 100 metres. He covered the distance in 4:05, which is reported as the best time ever made in France or England.

The horse can conveniently eat for twenty hours out of the twenty-four. A horse which is in good health has a good appetite at all times, and is able to stand plenty of work and is rarely on the sick list. To be a good feeder, especially on a journey, is a great recommendation in the opinion of every good judge of horseflesh. The reason of a horse being such a constant eater is that its stomach is really small in proportion to the size of its body, and therefore it requires feeding often, not less than four times a day, two of which should be early in the morning and at night, while hay should in the stall be always within its reach.—London Tit-Bits.

The Lexington, Ky., "Herald" says that Hon. W. C. Whitney has secured options on eight different farms, embracing 2,500 acres, situated in Fayette County, Kentucky. The land is located about six miles from the city of Lexington and is bordered by the Richmond, Winchester and Todd turnpikes. The land is said to be thoroughly watered, and splendidly adapted for the purpose of a great breeding estate. With the incomparable Hanover at the head of this magnificent establishment surrounded by a band of broodmares of as high class as the best experience has been able to select when fully completed, Mr. Whitney will possess one of the best and most successful thoroughbred nurseries in the world.

When Maud S. trotted a mile on the Cleveland track in 2:08¾ the performance created much talk, and there was no lack of wise people who declared that the speed limit of the trotter had been reached. They even undertook to prove what they said by figures. They first calculated the utmost length of a trotter's stride, and by applying the watch they made an exhibit that was truly puzzling. Then Martha Wilkes came along and trotted a mile in 2:08, and these mathematicians marveled greatly. Then came Kremlin, 2:07¾; Bingen, 2:06½; Fantasy, 2:06; Directum, 2:05¼; Nancy Hanks, 2:04; Alix, 2:03¾; The Abbot, 2:03¼, and finally Cresceus, 2:02¼, and still they wonder. But why marvel? Nobody is wise enough to measure the limit of speed in the game American trotter.

Memphis, Tenn., is an enterprising city and is widely famous for the hospitality of its citizens. It is several hundred miles further south than Lexington, and it is only in exceptionable years that frost is seen in that vicinity earlier than the middle of November, says the "Stock Farm." At the conclusion of the Lexington trotting races the eyes of the turf world will be turned toward the city on the Chickasaw Bluffs. The new track has been completed, and the meeting there is scheduled for six days, beginning October 21. The early closing events filled to the satisfaction of the management, and to complete the program a list of twelve class races are announced to close October 1. Extensive preparations have been made for this inaugural meeting at Tennessee's commercial metropolis, and no expense has been spared in providing for the comfort and convenience of the public. The track is constructed on a plan especially designed to aid the trotter in attaining his greatest speed, and is an ideal one from whatever point it is viewed, while the grandstand, barns and other appointments are in keeping with the impressively handsome surroundings.



RACE COURSE—CLUB HOUSE AND GRAND STAND, ST. LOUIS FAIR GROUNDS.

BLUE BULL NOTES.

By L. E. Clement.

Schaible Girl equals Anagallis, by Prodigal in her first two foals, and as a dam at seven years of age.

She equals Lady Pepper in her first three foals and as a dam at eight years of age. Her fourth, Fleetwood, 2:13½, in the third heat, equaling Lady Pepper's fastest trotting record made when Cloral was eight years of age.

H. B. Henderson of Columbus, Kansas, has a daughter of Counsellor, out of Molly Bawn, dam of Robert Russell, 2:13¼, and Walter Wilkes, 2:14½. This mare should make a great brood mare. Her oldest is a nice looking yearling filly by Anteros, and her second a clean cut high-headed sucker by Integrity.

Griffin in the "Turf, Field and Farm" in list of foundation sires who are not now adding new performers, says: Blue Bull sired the dams Floradora, 2:18½; George Castle, 2:11 1-3; and Rossa W., 2:24¼. Add Winfield Stratton, 2:13¼, and Blue Bull and George Wilkes are again on even terms as sires of dams.

Manville, by Meander, owned at Oswego, Kas., adds new performers this season as follows: Hazel Grant, 2:24¼; Lady M., 2:29¼, and the pacer Manza Peirce, 2:15¼. This is a great showing for Mr. Kemper's horse, and friends will rejoice with him on his success.

Happy Wilkes, by Equity, reduced his record during the present season from 2:24¼ to 2:13. Equity also adds Miss Sarah, 2:21¼, trotting, his first trotter. He is credited with four pacers, three of them now have records better than 2:15.

One of the most consistent race horses out this season is the little brown horse S. P. by President Red, shipped to New Jersey last winter and raced without having a chance to become acclimated. He has reduced his record from 2:23¾ to 2:12½.

Lex 8225, by Legal Tender, Jr., will take a prominent place as a sire. He should have credit for: Six Forty, 2:25; Guy H., 2:23½; Lexy, 2:20¼. The dams of Six Forty and Lexy are both by Rich Wilson, also a son of Legal Tender, Jr. Six Forty is the sire of Lelia B., 2:18½, and Nelly G., 2:22.

In the last Year Book he is only given credit for Guy H., 2:23½. His daughter, Madam Peirce, is the dam of Billy Mack, 2:14¼, with 13 winning heats in 2:25 or better, and the only performer to the credit of his sire, Reward, Jr., 2:10¼, by Bourbon Wilkes, out of Lark. That adds two sires to her list of sons that are sires.

Curtis, a chestnut gelding, with no record, sired by Rich Wilson's little brown son of Blue Bull 75 Kindergarten, was inside the money in 2:16 class at Baltimore, Md. He was second in the second heat in 2:14½.

Panrose, by Penrose, made one or two starts in the Missouri Short Haul Circuit. He is a pacer and strongly bred, and is owned at Sheldon, Mo. Penrose is the sire of three trotters and 10 pacers. Four of them with records better than 2:15. Sheldon has possibly more good horses than any town in Missouri of its size.

The racing at the Missouri State Fair should be as good as is seen at any state fair in the United States. It can't be done on $500 stakes and purses. Nothing attracts the attention of breeders like a futurity. Six days racing at the regular price would call for $3 gate money from every adult person that goes through the gates. A futurity stake to close March 1 with $6 paid, March 1, to include a season ticket for the fair, with a cash payment of $5 more Nov. 1 and 5 per cent of the guaranteed amount paid one-half March 1 in the year of the race, and the other half the night before the race. Two-thirds of the money to go to the trotters and trot as three-year-olds, and one-third to the pacers and pace as two-year-olds. This would bring out the colts, enthuse the people and swell the gate receipts.

Then open six early closing stakes one for each day of the week for from $1,000 for 2:35 trotters and pacers, to $5,000 for 2:10 trotters and pacers, and more people will see the poultry, dairy, swine, fruit and mechanical displays, than will enter the grounds of any other state fair in the country. Now is the time to work when we are not hurried. We have the track, we have the buildings, we have the location and in order to make money and make a creditable showing we must get the attractions and get them before the people.

In 1902 we should have as clean a week's sport, and as fast racing as Readville, Lexington or Detroit. Detroit gets the early starts and the horses before they become stale. Lexington gets the best colt races because the money is put in sight for the colts. Men will be figuring the next day after the Lexington races close for certain material for 1902, Transylvania and a portion of the annual distribution of $10,000. Providence tried the experiment in 1901 of $10,000 in one stake for pacers. Will she try it again? If she does others will fall into line. Eternal vigilance is the price of liberty, and watchfulness in time and early preparation, will give us one of the greatest State Fairs of 1902—and still continue to improve for years to come. I think Missouri has had her most insignificant meeting as a State Fair, and circumstances considered it was grand.

MISTAKES OF BEGINNERS.

Most persons are liable to make mistakes when first entering upon the horse-breeding business. Perhaps the most frequent one is stocking the farm with too many brood mares on the start, says the "Horse Breeder." Very few avoid this mistake, as very many have learned to their sorrow a few years later. The small breeder in moderate circumstances who breeds for profit should first determine how many head of stock his farm is capable of supporting, and his stables and paddocks are capable of accomodating. He should make due allowance for barren mares each year, which will generally average about three in every ten. He should next consider that as a rule horses raised in the North are not in demand in the market until five years old.

A breeder who starts with ten brood mares and raises seven foals a year on an average is liable to have some forty-five head of horse stock on his hands before his first crop of foals is in marketable condition. This seems a long time to wait for any returns. Occasionally a youngster of so much promise may be raised that a sale may be made at an earlier age, but it will not be safe to count on that until after a breeder has established the reputation of raising race winners, which is not likely to be done in the first five years.

Another grave mistake that most beginners are liable to make is in buying mares of an inferior quality. It is better to start with three first class mares than with a dozen of medium quality. The average small breeder of moderate means should aim to produce size, beauty and style as well as speed. Then, if he fails to get speed, as he surely will at least nine times out of ten, those which are not fast enough for the track or speedway can be sold at a fair price for carriage purposes and general use.

In making a judicious selection the breeder must be familiar with pedigrees, and must also have some knowledge of the characteristics of all the ancestors for several generations back. Many breeders have been disappointed by mating a good sized mare with a good sized horse and getting an animal that has been small at maturity. In many cases this has been due to the fact that though the sire and dam were of good size, their ancestors, or some of them, at least, have been small, or were from families in which a general lack of size has been one of the characteristics. As a rule a small sized mare whose ancestors were of good size, and were from families that were, as a rule, noted for good size, will produce a larger proportion of good sized animals than a large mare the majority of whose ancestors were small. Most of the fastest trotters have been produced by mares rather below than above the average in size. If extreme speed alone were desired the matter of size would be of secondary importance. The breeder in moderate circumstances cannot afford to breed solely for speed. Leave that to men of wealth.

Another mistake that beginners are liable to make is in not paying sufficient attention to the pedigrees or blood lines of their mares. Every one who has studied the subject of breeding trotters has learned that mares from certain families have produced speed with the greatest uniformity when bred to stallions that have been the descendants of some particular family, and vice versa.

For instance, the fastest trotters got by Rysdyk's Hambletonian were from daughters of Seely's American Star, and his next fastest were from mares that were descendants of old Henry Clay, and daughters of Herr's Mambrino Patchen have produced the best results when mated with stallions of the Hambletonian family. The man who makes it a rule to breed in those lines which have been and are now producing speed with the greatest uniformity will be more likely to succeed than the one who pays no attention to this matter when making his selection of mares and stallions.

Individual merit and family merit, as well as pedigree, must be considered. Animals that do not meet the requirements in all these particulars should be rejected. The novice who selects solely **on account of pedigree, however, will** be more likely to meet with success than the one who selects good individuals without regard to pedigree. It is true that the law of inheritance is but imperfectly understood, but it is generally conceded that like produces like, or the likeness of an ancestor. Some excellent individuals may be found, nine-tenths of whose ancestors were undesirable animals. The produce of such an individual is very liable to throw back to some undesirable ancestor.

The poor old horse with his hair dead, eyes dull, kidneys and digestive organs out of order. Fix him up with Young's Kidney and Nerve Powders; 25c a package, at regular dealers. Mfd. by W. F. Young, P. D. F.

MONEY WINNERS OF THE YEAR.

Four trotters and one pacer have won upward of $10,000 at the big harness meetings this year. Eleata, 2:08¾, leading with $18,000 to her credit. The black daughter of Dexter Prince for a time seemed well nigh unbeatable, but now shows signs of having too much of it. Country Jay, 2:10½, by Jay Hawker, dam by Parkville, is second; Neva Simmons, 2:11¼, by Simmons, dam Neva, by Squire Talmage, third, and Onward Silver, 2:06¾, by Onward, dam Sylvan Maid, by Aberdeen, fourth.

The pacing brigade big four is represented by Audubon Boy, 2:06, by J. J Audubon, dam Flaxey, by Bourbon Wilkes; Dan Patch, 2:04½, by Joe Patchen, dam Zelica, by Wilkesberry; Shadow Chimes, 2:06¾, by Chimes, dam Charmer, by Mambrino King, and New Richmond, 2:08¾, by Brown Hal, dam Jewess, by A. W. Richmond.

Of the eight Dan Patch and Audubon Boy have the double cross of Wilkes blood; Country Jay, the Wilkes-Electioneer cross; Neva Simmons and Onward Silver, the Wilkes-Hambletonian strains. New Richmond, Eleata and Shadow Chimes, represent Brown Hal, Mambrino King and Kentucky Prince. Country Jay is by Jay Hawker, 2:14¾, by Jay Bird, he by George Wilkes. His dam (S. T. B.) Sub Rosa, 2:23¾, is by Parkville, 6050, by Electioneer, granddam Aurora, 2:27; by John Nelson, and great granddam the Lamott mare, giving Country Jay the Wilkes-Electioneer cross.

Neva Simmons was sired by Simmons, 2:28, by George Wilkes, dam Neva, by Squire Talmage, son of Hambletonian, 10; grandam by Tom Traveler, son of Tom Crowder (Brown's); great-grandam by Sorrel Tom, he by (Shawhan's) Tom Hal.

Onward Silver was sired by Onward, 2:25¼, son of George Wilkes, dam Sylvan Maid, by Aberdeen, 27; by Hambletonian, 10; grandam Kentucky Central, dam of Kentucky Union, 2:07¼, by Balsora, he by Abdallah, 15.

Audubon Boy was sired by J. J. Audubon, son of Alcyone, 2:27, another son of George Wilkes; dam Flaxey, by Bourbon Wilkes, he by George Wilkes. Flaxey is also the dam of Royal R. Sheldon, 2:04¾, by Constantine, and Red Elm, 2:16¼.

New Richmond was sired by Brown Hal, dam Jewess, by A. W. Richmond, son of Blackbird, 401.

Shadow Chimes, by Chimes, dam Charmer, by Mambrino King, dam of Carilion, 2:16¼; Charming Chimes, 2:17½.

Dan Patch was sired by Joe Patchen, he by Patchen Wilkes 3560, son of Geo. Wilkes. His dam, Zelica, is by Wilkesberry, son of Young Jim, also a son of George Wilkes; grandam Madam Adams by American Clay.

Eleata is by Dexter Prince, son of Kentucky Prince, he by Clark Chief, 89. Elden, her dam, is by Nephew, son of Mambrino.

The following table shows the amount of money won:

TROTTERS.

Eleata	$18,100
Country Jay	13,375
Neva Simmons	11,575
Onward Silver	10,725

PACERS.

Audubon Boy	13,350
Dan Patch	9,000
Shadow Chimes	7,920
New Richmond	4,750

BREADWINNERS COME HIGH.

After the chestnut colt, Audubon Boy, had won the Park Brew Stake of $10,000 for 2:10 pacers, at the Providence Grand Circuit meeting, it was made public for the first time that James Hanley of that city had purchased the fast pacer at the Columbus Grand Circuit meeting, the consideration being $15,000. Since the Columbus meeting he has already earned about $8,000 for his new owner, and as he still has $20,000 worth of stake engagements to fill, he will probably win himself completely out for Mr. Hanley. Audubon Boy is a four-year-old chestnut colt, by J. J. Audubon, 2:19, son of Alcyone, 2:27. His dam is by Flaxy, by Bourbon Wilkes, grandam Kit, by Clark Chief. **Flaxy is also the dam of Royal R. Sheldon, 2:04¾, and Red Elm, 2:16¼. Audubon Boy was started in one race prior to this season, winning a two-year-old futurity stake at Lexington in 1899 in 2:24¼ and 2:24. He has won seven out of eight races this year, and looks a sure 2:04 pacer. The unbeaten pacer of the year is Dan Patch, 2:04½, a five-year-old brown stallion, by Joe Patchen, 2:01¼; dam Zelica, by Wilkesberry; grandam Abdallah Belle, dam of Colette, 2:19¼, by Pacing Abdallah. This fast son of the popular and famous Joe Patchen has won every race he has started in this year, and seven of his eight victories were won in straight heats. Dan Patch is the property of Dan A. Messner of Oxford, Ind., and was started in four races last year, winning all of them, and taking a record of 2:16. An offer of $20,000 was made for him at the Providence meeting, but even this large price was promptly declined.—American Sportsman.**

A DESCRIPTION OF STAMBOUL.

The following correct and at the same time beautiful description of Stamboul, son of Sultan, was written by the late Leslie McLeod while on a visit to California:

"I feel considerable temerity in recording my honest impressions of Stamboul as an individual lest I be accused of insincerity, and of dealing in fulsome flattery—a commodity which I avoid. But if it is a writer's privilege to criticise, it is none the less to praise where, in his estimation, great praise is due. I am not going to say that I never saw a horse individually as great as Stamboul, but I do say I never saw one that in form was his superior, and I would be at a loss to name his equal. When he came out into the light, a long look ended in the mental exclamation: "Now, here is equine majesty and greatness if ever I saw it." If he couldn't trot a mile in five minutes, and if his blood was as plebian as Blue Bull's, Stamboul is a horse that will rivet the gaze and challenge the admiration—one whose lineaments, distinct and clear, the camera of memory preserves after he has gone from view.

"Stamboul is a deep, rich and glossy bay in color, with white rear ankles, and otherwise black points. He is just 15.3 hands high,—as near the right size as I would ask—and weight, in fair condition, something over 1,100 pounds. His head is in good proportion to his body, and is itself handsome and proportionate, with just a slight inclination to a Roman profile. Between the eyes it is wide; and above, brainy. The neck is very beautiful and well carried, and the shoulders and chest deep, stout and wide. The girth is immense, the depth through the heart region unusual, and the withers rather high and nicely finished. The barrel very cylindrical and springily ribbed, carries its depth well back, so that Stamboul is far from being a "light-waisted" horse, and I am told in his campaigns he never loses his rotundity or "tucks up" much. The back is unexceptionable, short and strongly-coupled, and the quarters very smooth, full and muscular. One of the strongest points about Stamboul are his legs, which are simply grand. Cleaner, more perfectly shaped legs and joints one need never see. The cannons are extraordinarily flat and wide, cords clear and conspicuous, and his feet are good. No better idea can be given of the quality of his traveling gear than is revealed in the fact that he does not show a puff for all his campaigning, and is apparently absolutely sound. He carries only five-ounce shoes forward and three-ounce behind, without weights. Stamboul is a more compactly built horse than most of the Sultans that I have seen, and in not any sense a leggy horse. With excellent finish and symmetry, with faultless proportion and consistency of form, he combines great substance and high quality."

HOW TROTTERS ARE BRED.

Every man who attempts to breed harness speed at all would like to breed a world beater, and the man who could get up a "never-fail" formula for extreme speed production would have all of the "patent medicine men" faded, says the "Western Horseman." But this formula like the formula for making "elixir of life," is not within the scientific grasp of mortals. There is an uncertainity about harness speed breeding which makes the effort captivating, and, at the same time, aggravating. We repeat certain crosses which have given grand results, yet we get a blank. Again, we mate an indifferent sort of a mare with a stallion, from which we expect nothing more than a good roadster, and we get a Grand Circuit winner. Walter E. 2:10, was one of this kind. But Walter E.'s are too scarce to receive serious consideration as object lessons in speed breeding. Approved crosses sometimes fail and indifferent crosses sometimes succeed, but, as in life insurance, it is the grand average of results from which laws of usage are deducted and followed. In efforts at speed breeding failures sometimes result when the most approved matings have been made, but in harness speed breeding, as in other lines of improved live stock breeding, intensity and uniformity of family characteristics follow in ratio to the line intensity of the parents used. Imperfection is a frequent occurrence in nature as well as in art, nature herself ofttimes going amiss of her own laws. In speed breeding "like produces like or the like of an ancestor," and it is the last clause of this adage, "or the like of an ancestor," that so often plays sad havoc with our calculations in speed breeding. The best of our trotting family are yet short bred, and it is but a little way back to an ancestor that possessed no trotting speed qualities at all, and when we get poor results from mating two of our best trotters, both by breeding and performance, it is because like has not produced like, but the like of an ancestor which was not a trotter in any sense of the word. At this stage of harness speed breeding, with the unparalleled array of trotting line-bred performers, it seems superfluous to even mention the fact that line breeding, viz., breeding within well-established trotting-bred families, is the only logical, practical and successful road to harness speed production. Cresceus, 2:02¼; The Abbot, 2:03¼; Alix, 2:03¾, and Nancy Hanks, 2:04, the four fastest trotters in the world, are all bred that way, as is also nearly every other trotter in the 2:10 list. As some splendidly trotting-bred animals breed back to an ancestor which could not trot, i. e., back to the like of a remote ancestor, so, too, the offbred extreme speed trotters breed back to a single trotting taint, taking their inheritance from possibly the faintest blood line in their composition, thus only adding proof to the proposition that in animal reproduction only from a specific source can a specific characteristic come.

KENDALL'S SPAVIN CURE.

Fairland, Bennet Co., Tex., Dec. 10, 1900.
DR. B. J. KENDALL CO.

Sir: I have been using your most valuable liniment on a good many horses, mules and jackasses for a few years; also have used it on human flesh and think it better than anything I can get for enlarged joints or sores of any kind. Please send me your book, "A Treatise on the Horse." Yours most successfully,

W. R. WOODS.

Home Circle

A FRUIT-PIECE.

The afternoon of summer folds,
Its warm arms round the marigolds,

And, with its gleaming fingers, pets
The watered pinks and violets,

That from the casement vases spill,
Over the cottage windowsill,

Their fragrance down the garden walks
Where droop the dry-mouthed hollyhocks.

How vividly the sunshine crawls
The grape-vine shadows on the walls!

How like a truant swings the breeze
In high boughs of the apple trees.

The slender free-stone lifts aloof,
Full languidly above the roof.

A hoard of fruitage, stamped with gold
And precious mintins manifold.

High up, through curled green leaves, a pear
Hangs hot with ripeness here and there.

Beneath the sagging trellis clings
In lush, lack-luster clusterings,

Great torpid grapes, all fattened through
With moon and sunshine, shade and dew,

Until their swollen girths express
But forms of limp deliciousness—

Drugged to an indolence divine
With Heaven's own sacramental wine.
—James Whitcomb Riley.

Written for the RURAL WORLD.

THE LOUD GIRL.

Recently in a public gathering two girls were noticed who talked in loud tones, and of matters that should only have been discussed in the privacy of their own homes. They discussed the private affairs of leading citizens in such a manner, as they thought (at least so it seemed), would show that they were on most intimate terms with these parties. If they were as intimate as their conversation would seem to indicate, assuredly they were guilty of the almost unpardonable—that of making public the private affairs of their friends. All sitting convenient could not avoid hearing the conversation.

Other times have we been pained when young girl acquaintances have endeavored to attract attention by boisterous conduct—laughing loudly, talking in noisy tones and throwing themselves back and forth. The vehemence with which they conversed and the glances cast at those near them very plainly said: "Don't you see me? Aren't we having lots of fun?"

Many times such conduct is the result of the lack of careful training, or the exuberance of youth. But it always betokens lack of self-control. While in children it is pardonable, a young woman should never thus cheapen herself—no phrase so fully expresses such deportment as cheap.

Young women who have become conscious of the folly of loud, boisterous conduct always deeply regret the time when they were so heedless as to right public conduct. Young men are sometimes attracted by it, but they as surely censure sisters for rudeness in public. Inconsistent! you say? Yes, and furthermore, we are many times surprised that the one we regarded as popular because of forcing herself into public notice is our "bachelor" girl—you know old-maid is obsolete. But a gentle, well-bred girl who is always ladylike in company will ever be a favorite.

Then, too, the influence of such girls is far reaching. A brother is many times kept from evil by a sister who is noted for her modest bearing. This doesn't mean that she is lacking in force of character, but that she does know how to control herself. Let our girls have their spring time of life full of joy, but let them know that rudeness brings its own sting. A quiet, dignified bearing in public will attract the notice of desirable friends and will get the approval of all. Don't be loud for the sake of fun or attracting attention.

MRS. MARY ANDERSON.

Caldwell Co., Mo.

Written for the RURAL WORLD.

CLIFF REMINISCENT SKETCHES.

The Gypsy Camp.

At one time just succeeding the closing scenes of the Civil War, a band of gypsies was camped on the open space at the northern terminus of Cave Hollow. They were more numerous than such bands usually are, and had a full proportion of women and children.

Their camp presented an ideal picture of a desultory and roaming life. Their hastily erected habitations were rude in construction and the surroundings slovenly in aspect. The wagons were placed in a circle around the camp. The whole formed a scene in portraiture picturesque in its realism.

A detachment of the band occupied the area in front of the cave and utilized it for a storehouse for such goods as they possessed, and for an armory. Their horses were picketed indiscriminately along the Hollow between the two camps, and were as a rule fine animals. They were fed with forage surreptitiously obtained from the farmers of the surrounding country.

The men made frequent raids into the more densely populated country and to the towns and villages at a distance in larger or smaller bodies, according to circumstances, and always returned laden with plunder. When not on these jaunts they lounged around camp in idleness and sleeping, smoking their pipes and feasting. The women did the drudgery, manufactured notions for retail at the villages, told fortunes and appropriated to themselves such articles as came in their way.

Mathilde, Queen of the Gypsies, joined the band during their sojourn here and remained with them for several weeks. These were halcyon days for the band. There was less drudgery for the women, the men were more active in cleanliness and the camp had a greatly improved condition in comfort and appearance. Many people visited them, coming from miles distant, especially on Sundays, when the environs of the camp resembled a picnic of large magnitude, and some lively scenes were enacted—the men trading horses, the women disposing of their notions and retailing spurious fortunes to their credulous dupes. The fortune they obtained was far more stable than that disposed of.

The Queen was a remarkably handsome woman of Spanish and Egyptian lineage, with jet black hair and eyes, a stately figure, an imperious walk, of about thirty years of age, born to command, yet supremely loved by all her subjects. At the time she came to the camp here she was en route to meet the assembling bands of her people in the East. She had recently traveled through several states in the sunny South and made an extended tour in the West, having consumed a year in her jaunt and visited numerous bands. When she departed for her destination the band here accompanied her, and gypsy life in Cave Hollow had ended. DYPE.

Effingham Co., Ill.

Written for the RURAL WORLD.

GOLDEN ROD.

"Ah not in the morning of April or May,
When the young light lies faint on the sod,
And the wind flower blooms but the half of a day,
Not then comes the Golden Rod.
But when the young year has grown vivid and bold,
With its utmost of beauty and strength,
Then it lifts up its leaves and its banners unfold,
All along the land's green length."

Now is the time when the golden rod becks and nods, everywhere, seemingly. I have an idea that I would like to see carried out. It would teach children to know and love the flower better. Let the principal or teacher of every school set apart a day as they do for so many other things, and call it Golden Rod Day. Let the house be profusely decorated with it. Have select poems recited by scholars about it. It is a pretty flower and there are many nice things said about it by different ones. I am going to give what poems I have to little folks to learn.

Barry Co., Mo. PEARL M.

Written for the RURAL WORLD.

CLEANING CARPETS AND RUGS.

Those who have heavy Brussels and moquette carpets often find it convenient to clean them without taking them from the floor, and this can be very easily and satisfactorily done. Tear some old newspapers into small pieces, soak them in water, then roll them between the hands until they form little soft balls. Scatter them thickly over the carpet; then give it a thorough sweeping. The paper will collect the dust and keep it from flying about. Prepare a cleansing mixture by dissolving two bars of white soap in half a gallon of hot water and adding four ounces of borax. Add enough of the mixture to a pan of warm water to make a strong suds, and scrub the carpet with it, using a brush and taking only a small place at a time, just as you would scrub a floor. When the place you are scrubbing is clean, wipe it with a soft rag wrung out of clear water, and proceed in this way until you have gone over the entire carpet. If only a small portion is soiled this may be washed and the remainder left as it is. The borax is a great help in cleaning the carpet, and does not injure the colors. When the work is done, open the windows and doors and let the air have free access so it will dry quickly. Rugs may be fastened to a board or table by tacking them down at the corners and cleaned in the same way. KANSAS HOUSEKEEPER.

Lyon Co., Kas.

Written for the RURAL WORLD.

MORE DROUTH PEACHES.

Mrs. Anderson, you are not the only one that had drouth peaches. I had almost despaired of getting any fruit for winter this year, as fruit had been so scarce around here. When I heard that a neighbor had some peaches to sell I immediately sent my husband to see about getting some. When he returned with them and I saw they were such small, insignificant little things my heart sank within me as I thought of paring them to can. I said there will be nothing left when they are pared, and the pits taken out. I tried scalding and paring that way, but they broke up so badly when they were cooked; so at last I tried the plan suggested by the boys of canning them without paring them, just cutting them in half and taking out the pits. Have ready a nice syrup boiling hot, drop the peaches in and cook till tender enough to pierce with a broom splint, and lo! the nicest sauce. The peaches keep their shape beautifully, the color is fine, and the syrup is a little dark in color, but nice and thick, and the work is so quickly done.

For pickles I washed and wiped them good to get the fuzz off and left them whole, having ready a nice syrup of sweetened, spiced vinegar, such as one would use for any sweet pickle. I dropped the peaches in and cooked till tender enough to pierce with a straw, but was careful not to cook too long, as then they would come off from the stones and mash up. I put them hot into self-sealing jars covered with the hot spiced vinegar and sealed hot. They will keep for years put up so, if left alone.

I will give the sisters my recipe for cocoanut pie. Often when making pies one has enough crust for a bottom of a pie, but having enough pies made for the time does not care to make another. I have adopted the plan of baking the crust without a filling and setting it away. In the middle of last of the week when the Saturday's baking is all gone it is easy to make a filling; and lo! a nice fresh pie for dinner, and my cocoanut pie is one of my fillings. One pint sweet milk, one-half cupful sugar, put on the stove and let come to a boil; stir in two tablespoonfuls cornstarch wet up with a little milk. When it has cooked thick enough remove from the fire, stir in one egg beaten light, one-half cupful shredded cocoanut and one teaspoonful orange extract, and pour in the ready baked crust, sprinkle a little of the cocoanut over the top of the pie, or the white of the egg may be reserved and whipped into a meringue and put on the top of the pie. This makes a very rich pie.

In making plum butter add one-third apples cooked and rubbed through the colander. It improves the flavor of the plum butter and if plums be scarce, also adds to the quantity. Plums boiled and seeded and cooked with apples without putting through the colander, sweetened to suit the taste, make a nice sauce, something like marmalade. Apples and grapes also make a nice sauce. Remove the seeds of the grapes by separating the skins from the pulp, cook the pulp and put through the colander; cook pulp, skins and apples together and sweeten.

MRS. F. J. EDWARDS.

Seward Co., Neb.

I CAN AND I WILL.

"I know a boy who was preparing to enter the junior class of the New York University," says a writer in an exchange. "He was studying trigonometry, and I gave him three examples for his lesson. The following day he came into my room to demonstrate his problems. Two of them he understood, but the third—a very difficult one—he had not performed. I said to him, 'Shall I help you?'

"'No, sir, I can and will do it if you give me time.'

"I said, 'I will give you all the time you wish.'

"The next day he came into my room to recite another lesson in the same study.

"'Well, Simon, have you worked that example.'

"'No, sir,' he answered, 'but I will do it if you give me a little more time.'

"Certainly; you shall have all the time you desire.'

"I always like those boys who are determined to do their own work, for they make our best scholars, and men, too. The third morning you should have seen Simon enter my room. I knew he had it, for his whole face told the story of his success.

Yes, he had it, notwithstanding it had cost him many hours of hard work. Not only had he solved the problem, but, what was of much greater importance to him, he had begun to develop mathematical power, which, under the inspiration of 'I can and I will,' he has continued to cultivate, until to-day he is professor of mathematics in one of our largest colleges, and one of the ablest mathematicians of his years in our country." -Selected.

GOOD BROTHER JIM.

The car remained at a standstill for so long a time that everyone wondered if something were wrong. It was soon seen, however, that a sturdy little urchin was very tenderly helping a lame child aboard, and as the car moved on, his cheery "good-bye" called a smile to the cripple's wan face.

The latter seated himself so that he could look out the window, and every few minutes he waved his hand at some one on the street. The other people in the car became curious, and, looking out, saw a little fellow running along the sidewalk, keeping pace with them.

"Who is that?" asked a lady of the lame boy.

"Why that's Jim!" was the proud response.

"Yes, dear; but who is 'Jim'?"

"Why, Jim's my brother, of course!"

By this time every one was listening in smiling sympathy.

"Oh! I see," said the lady; "that's the boy who helped you on the car. But why does he not ride with you?"

"Why," he said, "we only had a nickel, and Jim said I must ride. You see," he added, after a pause, "I can't walk well, but Jim, he can run fine!"

"See! what is this?" the lady said.

With eyes big with delight, the child caught up a five-cent piece that had miraculously appeared in his torn little cap which lay on the seat between the lady and himself. Then, with frantic gestures, he hailed "Jim," who boarded the car at the next corner.

It would be hard to say who was happiest on that car during the remainder of the trip, but surely the boys thought that they were.—Vick's Family Magazine.

CHOCOLATE LOAF.

One-half cup grated chocolate, yolk of one egg, one-half cup milk. Cook together until rather thick and set in a cool place, while the following is prepared: Yolk of two eggs, one and one-half cups sugar, one-half cup butter, one cup flour, one-half cup sweet milk. To these add the cooked chocolate; beat all together and add the beaten whites of two eggs and another cup of flour, to which is added two teaspoonfuls of baking powder. The remaining white of egg may be used to frost the top of the loaf.

ARE YOUR KIDNEYS WEAK?

Mr. A. S. Hitchcock, East Hampton, Conn., (The Clothier) says if any sufferer from Kidney, Bladder or Kindred diseases will write to him he will tell them how he was cured. He has nothing to sell or give, just directs you to a Home Cure that does the work.

WHEN JOHNNY SPENDS THE DAY.

When Johnny spends the day with us,
you never seen the beat
O' all the things a-happenin' in this ole house an' street.
Ma she begins by lockin' up the pantry door an' cellar,
An' ev'ry place that's like as not to interest a feller.
An' all her chiny ornyments, a-stickin' 'round the wall,
She sets as high as she kin reach, for feer they'll get a fall.
An' then she gits the arnicky, an' stickin'-plaster out,
An' says, "When Johnny's visitin' they're good to have about."
I tell you what, there's plenty fuss
When Johnny spends the day with us.

When Johnny spends the day with us,
Pa puts his books away,
An' says, "How long in thunder is that noosance goin' to stay?"
He brings the new lawn-mower up an' locks it in the shed;
An' hides his strop, an' razor, 'tween the covers on the bed.
He says, "Keep out that liberry, whatever else you do,
Er I shall have a settlement with you an' Johnny, too!"
Says he, "It makes a lot o' fuss
To have him spend the day with us!"

When Johnny spends the day with us, the man across the street
Runs out an' swears like anything, an' stamps with both his feet;
An' says he'll have us 'rested 'cause his winder glass is broke,
An' if he ever ketches us it won't be any joke!
He never knows who done it, 'cause there's no one ever round,
An' Johnny, in perticular, ain't likely to be found.
I tell you what, there's plenty fuss
When Johnny spends the day with us!

When Johnny spends the day with us, the cat gits up an' goes
A-scootin' 'crost a dozen lots to some ole place she knows;
The next-door children climb the fence an' hang around fer hours,
An' bust the hinges off the gate, an' trample down the flowers;
An' break the line with Bridget's wash, an' muddy up the cloze;
An' Bridget she gives warnin' then—an' that's the way it goes—
A plenty noise an' plenty fuss,
When Johnny spends the day with us!
—Elizabeth Sylvester in September Century.

WHAT TO DO IN EMERGENCIES.

If a woman's dress is suddenly enveloped in flames, instead of running to her or out of the house, speak distinctly and commandingly: "Lie down and roll over!" Meanwhile, rip up the carpet or drag off a bed blanket, throw it over the person, and then proceed to wrap her up closely in it; this is a more certain and speedy extinguisher than water, is more accessible, and entirely safe to the person giving aid.

If a man faints away, instead of yelling out like a savage, or running to lift him up, lay him at full length on his back on the floor, loosen the clothing, push the crowd away so as to allow the air to reach him, and let him alone. Dashing water over a person in a simple fainting fit is a barbarity, and soils the clothing unnecessarily. The philosophy of a fainting fit is, the heart fails to send the proper supply of blood to the brain; if the person is erect that blood has to be thrown up hill, but if lying down, it has to be projected horizontally, which requires less power.

If a person swallows a poison, deliberately or by chance, instead of breaking out in multitudinous and incoherent exclamations, dispatch some one for a doctor; meanwhile run to the kitchen, get half a glass of water in anything that is handy, put into it a teaspoonful of salt and as much ground mustard, stir it an instant, catch a firm hold of the person's nose, the mouth will soon fly open, then down with the mixture, and in a second or two up will come the poison. This will answer in a larger number of cases than any other. If by this time the physician has not arrived, make the patient swallow the white of an egg, followed by a cup of strong coffee, because these nullify a larger number of poisons than any other accessible articles as antidotes for any poison remaining in the stomach.

If a limb or other part of the body is severely cut, and the blood comes out by spurts or jerks, per saltem, as the doctors say, be in a hurry, or the man will be dead in five minutes; there is no time to talk or send for a physician; say nothing, out with your handkerchief, threw it around the limb, tie the two ends together, put a stick through them, twist it around, tighter and tighter, until the blood ceases to flow. But stop, it does no good. Why? Because only a severed artery throws out blood in jets, and the arteries get their blood from the heart, hence to stop the flow the remedy must be applied between the heart and the wounded spot—in other words, above the wound. If a vein had been severed the would have flowed in a regular stream, and slowly; and, on the other hand, the tie should be applied below the wound, on the other side of the wound from the heart, because the blood in the veins flows toward the heart, and there is no need of such great hurry.—National Educator.

CROQUETTES OF VEAL.

Take some cold filet, or any part of cold veal, and mince it very fine. Place it into a stewpan with a little pale stock, a tablespoonful of cream, a little salt and pepper, with enough flour to thicken. Let it boil up, then pour into a soup plate and put aside till quite cold. Then divide it into small portions, form into little balls about the size of a bagatelle ball, roll in fine flour, then in beaten egg, roll in breadcrumbs and fry a delicate gold color. Dish up in pyramid fashion and garnish with parsley. Chicken is fine prepared in the same way.

BEEF LOAF.

Beat together three eggs and one teacupful of cracker crumbs, then stir into it one teacupful rich sweet milk. Mix this well into three pounds of lean, raw beef, which must be finely ground and seasoned with one-half teaspoonful black pepper, two rounding teaspoonsful salt and two teaspoonfuls Worcester sauce. Mold into a brick-shaped loaf, put into a greased baking pan, dredge with flour, a sprinkle of pepper, and put a few bits of butter over it; then around it three-fourths of a pint of water and a lump of butter the size of an egg. Bake in a hot oven one hour and a half, basting as it bakes.

Good hot or served cold, with mustard, horseradish or Chili sauces.

Poultry

GUINEAS.

They have great craft in the art of concealing their nests. For this reason it is not easy to control either the size of their flocks or the time of their arrival.

The guinea-hens remain practically wild, even on the farm, for they must range, or they can not live and thrive. Along with their ranging, they support themselves almost totally. No other fowl is so independent, in the matter of rations, as the guinea-fowl.

Where the farmer can secure the guinea eggs, he can control the hatching feature. The eggs require four weeks for hatching, but, by placing them under a hen for a week, and then adding hen's eggs, which hatch in three weeks, he can keep the hen sitting until the young guineas and chicks come out together.

In this way the naturally wild guineas may be made far more manageable. The young guineas will mingle with the young chickens, obey the hen's calls, and learn to occupy the roosts at night, as hens do. This is the only way to bring the guineas under control, and even this method does not always keep the guinea on a civilized basis. Its natural instinct is for a concealed nest, and a generally wild life amid domestic surroundings.

The singular habit of the guinea in promptly abandoning its young adds another difficulty to the growing of these birds. The guinea-hen, after sitting four weeks to bring out her young, will tire of their society right away after they are hatched. She will lead them around for a few days, probably to show them how to hustle for rations, and then she will trot away, leaving them to their own devices.

In this way many promising young guineas will be lost. This can be avoided by the method of giving guinea eggs to hens and fooling the biddies into doing the extra week of sitting required to bring the guinea-chicks out of their shells. It will pay any farmer to do this, for the guinea-hens are able to look out for their own rations, and they are master hands at the slaughtering of bugs and insects on the farm.

RULES FOR FEEDING.

No rules for feeding poultry will apply to all kinds. The breed that is to perform certain duties must be fed with the object of compelling it to produce to its maximum capacity. To feed for fat when growth is desired is to make a mistake, says the "Otsego Farmer." When eggs are the object the fowls should be of a breed that excels in the proportion of eggs, and the food should be varied. When fattening a bird for market, after its growth is completed, it may be given more grain than at any other time. The only rule that can be allowed is to feed with an object in view. It may be possible to give a nearly perfect ration for an animal or fowl, but it is not always advisable to use such a ration. It is possible that in some seasons, or in some sections, the cost of an element in that ration would make it unadvisable to feed. We must feed, to some extent, according to circumstances, always keeping in mind that it never pays to feed what will absolutely injure the flock, however cheap it may be. Food values and analyses are well enough, but the farmer who keeps a sharp eye on his flock, and notes the appetites of each one of his fowls, will know more about how to feed and what to give than all the theories that may be given. We do not mean to infer that the tables of feeding values are useless, or that the efforts of scientists are futile, but fowls differ in characteristics, and the only way to know is by practical observation. Many fowls refuse food and lose appetite simply for the lack of some substance to give the food a pleasant taste. Animals will reject food as well as humans. Salt is essential to digestion and it should be provided. There need be no fear of giving too much salt if the food is slightly seasoned with it. A small quantity added to the mash will induce the birds to relish it.

THE DANISH EGG TRADE.

The benefits of co-operation applied to the egg trade appear in a striking manner in the results obtained in Denmark. The Danish producers have founded everywhere throughout the country co-operative associations that propose to furnish fresh eggs, of good quality, for exportation. The majority of the producers are enrolled therein. Regulations of remarkable ingenuity assure the regularity of the operation of such associations. For example, in order to ascertain by what member a bad egg has been delivered, it is required that the shell of every egg shall bear the name of the producer marked with a rubber stamp. Large numbers of depots are established near the railways, and to these every producer is obliged to bring his eggs at least three times a week. The deliveries at each depot are controlled by a special employe, who has the right to refuse eggs that are several days old. The others are classified according to their size. This double operation of examination and classification is effected automatically by means of a very ingenious apparatus, which consists of a dark chamber, where they are examined by means of a lamp, and then to the table, where they are classified. With this apparatus five girls can classify and pack 12 cases of 100 eggs in 13 minutes. The English have improved this machine by separating the examination from the classification. The eggs, placed in a slightly inclined receptacle, enter cups jointed to the endless belt. This latter, in carrying them into the boxes, gives them a rotary motion. The belt is actuated by a small handwheel placed to the right of the examiner. To the left of the latter there is a drawer designed for the reception of the defective eggs. Owing to such an arrangement the eggs are examined very rapidly.

The operator, instead of examining the eggs one by one through the light, has merely to cast a glance at the rows that are passing over a lamp, in order to eliminate the bad ones and leave the others. The belt, continuing its motion, leaves the box with the examined eggs, and discharges the latter on the other side of a long inclined table.

The classifying apparatus is very simple. It consists of an inclined table, one of the extremities of which has a certain length of its surface covered with felt. It is here that the eggs are deposited, to be afterward slid over the glass surface of the table. The latter is provided here and there with parallel bars that arrest the different sized eggs upon their passage. The girls who slide the eggs over the table remove those that lodge between the bars and place them in special receptacles that flank each of these spaces. The manufacturers of the new apparatus claim that four girls can classify and pack with it 1,440 eggs in 10 minutes.

The Danish depositories provided with such apparatus are capable of rapidly and surely inspecting the eggs that are brought to them by producers and of shipping only fresh and perfect ones to London. They are, moreover, held responsible to the consumer and are heavily fined in case of shipment of defective eggs. The English highly appreciate the results of a so well-appointed organization. The Danish shipments to London are daily increasing, especially to the Aerated Bread Company, which has more than four hundred creamery establishments in the English capital.—Scientific American.

THE FLOCK THAT PAYS.

Farmers should bear in mind that it is the fall and winter eggs that pay best, so in order to be sure of getting a good supply at this time we must raise pullets each year, get them out early and give them good care, writes V. M. Couch in the "Ohio Farmer." If hatched late, they mature late, and this means late breeding birds next spring. If this is done you will find that your hens will begin to lay when eggs are most plenty. Of course it does not cost very much to keep poultry on the farm during warm weather, and for this reason, some may figure that there is as much money in eggs through the spring and summer as in winter, owing to the increased cost of winter eggs and the extra care required to get them. But if we must keep the hens the whole year for what eggs they lay from March until the time they moult, I should calculate that we would have to get a price considerably above that generally paid in spring and summer.

Some people seem to think that there is no use for them to make an effort to have the hens lay in cold weather, that they could not accomplish anything if they tried with the poor buildings they have, believing that winter eggs are only got by those who have expensive hen houses and a full line of poultry fixings. This is a mistake. It doesn't require anythng costly or fancy at all, but just a clean, comfortable and dry house. It doesn't need to be painted red or any other color, nor to have any fancy cupola on top. And to make a profit the house doesn't need a hundred hens in it, when there is only room for forty. This is where about nine-tenths of the farmers go wrong—putting too many in together.

It requires but little exertion on the part of the owner to fit up a house suitable for 50 hens, and the difference in price between the fall and winter eggs and those laid in spring and summer will much more than pay for the extra attention given. By having the hens lay through cold weather it will be found that they will average from 160 to 180 eggs per year. Poultry that is well cared for during winter will lay more eggs during the warm season, and the good care that is given them during the cold weather is sure to bring some eggs. Hence, in a way, we are able to get many more eggs per hen during the year. Another thing, it is the same with hens as with cows; it costs no more to keep a good one than a poor one, so get rid of all the scrub fowls and build up a nice flock of thoroughbreds—some that you will take a pride in showing to your friends. And as time goes on you will become more interested in this line, build more poultry houses, yards, etc., and increase your stock until you have two or three hundred head, which, with good care, will bring in more profit than any other branch of farming.

JOHN A. SHAW, McKittrick, Mo., has a poultry advertisement in another column. He breeds high class birds, as is shown by his having won prizes on birds of his own breeding at leading poultry shows for years. He was awarded seven first and four second premiums at the recent Missouri State Fair on 24 birds exhibited. He has a lot of young birds that he would like to sell before winter, and as an inducement will make special prices for the next 60 days. He breeds Buff Orpingtons, B. P. Rocks, Silver, White and Buff Wyandottes, M. B. turkeys and Pekin ducks. Look up the advertisement.

If given close attention as regards cleanliness and supplied with green feed a few hens can be kept in very close quarters.

In counting up the value of the farm poultry estimate the value of the eggs used on the table.

The Pig Pen

CONCERNING FALL PIGS.

There is no doubt about it, that if properly handled, fall pigs will make a better growth than those farrowed in the spring. The principal point is to furnish warm quarters upon the approach of cold weather, with a good, dry bed well littered, and a liberal amount of nourishing food. September is the month in which the farrowing should occur, for the weather is then warm without that extreme heat so debilitating to all very young animals, consequently rapid growth and a good size are assured before cold weather comes. The pigs may even be weaned and the dam again bred in time for an early spring litter, writes Fred O. Sibley in the "Ohio Farmer."

The sows, of course, should have a liberal range during the summer. After harvest they will do very well in the stubble fields, gleaning all stray heads of grain, finding grass along the fences, and hence require no other food. Added to this, the exercise thus obtained is exactly what is needed to insure healthy pigs. Just before farrowing time the sows should be taken to the barn, where the litter may be looked after to better advantage than in the field. Treated in this way, there will be little danger of the dams' eating their young.

As soon as possible the pigs should be let out on the ground. The exercise they will then take is good for them, and make them much better than if they were kept in a pen.

At first the sow's diet should be restricted to a little slop or bran mash, with plenty of cold water. Never give corn to a sow with little pigs. Rather should bran be given, ground oats or barley, or any combination of these feeds. Milk is also excellent, and when fed to the dam will induce a good flow for the pigs. September pigs weaned in November, or when about eight weeks old, will do very well by themselves, and the sow may be bred again as soon as possible.

Just after weaning is the most critical period with the pigs. If they are not properly fed then they will fail to thrive, and once at a standstill it is a skillful feeder indeed who can again get them into condition. Moreover, a pig once stunted will never get as large as one that has been kept growing regularly right up from its birth. Plenty of milk should be fed for the first few weeks after weaning; and it should be sweet skim milk, as sour milk is liable to cause bowel trouble. For this same reason the use of buttermilk is not to be recommended for either young pigs or for sows while suckling their pigs. Sweet skim milk made into a thick slop with bran or ground oats constitutes an excellent food for pigs.

How much should be fed? That must be determined by the amount eaten. Never give so much that there is some left in the trough at the next feeding time. It is better not to feed quite enough than to overfeed, for overfed pigs are very liable to be troubled with diarrhoea. If possible, one should feed just what the pigs will eat up clean before another feeding time.

Pigs that are nearly of a size only should be kept together. All the smaller ones should be sorted out and kept by themselves.

Small or large, however, all pigs do much better (even in midwinter, unless the weather be severely inclement) to have outdoor exercise. It will do them good to get to the ground during the day, but at night they should be shut up where there is a good dry bed of straw. Filthy resting places are an abominable thing in a hogpen, as elsewhere.

Corn should not be given until the pigs are nearly large enough to be disposed of for market purposes. Until then a good growth of bone and muscle is desired, and the grains already mentioned will produce these better than anything else.

WHY RAISE HOGS.

Except in a few isolated cases of wealthy men who farm for recreation and amusement, the class whom the late Horace Greeley recommended to plant the "striped handle" variety of broom corn, men go into farming as a business venture, just as they adopt any other calling, says the 'Western Swineherd." The prime incentive is, first to make a living; second, to make what profit is possible over and above a living. Could statistics be made available we believe they would show that since transportation has been available and markets became permanent more money has been made, with less labor, from hog raising than from any two other branches of farming that can be named, this, too, in spite of the fact that enormous losses have been sustained through the ravages of disease. To-day, with hogs at $5.50 and higher on the Chicago market hogs are veritable gold mines for their raisers.

It is our belief that every farmer of 20 or more acres of land, be he owner or only tenant, will find hogs his most profitable product, year in and year out. They will largely convert most of his other crops into pork at a price beyond their market value, and in addition will make pork from much that would otherwise go entirely to waste. The time and labor given to hog growing is as a rule so slight as to interfere but little with his other work, not that extra time and care would not add to the profits, but because the hog will thrive with little attention as no other live stock will.

The expense of starting a herd is infinitesimal compared with that required to get a start with horses or cattle, and the returns follow so close upon the start that the investment is realized upon in as little time as is a corn crop. The phenomenally successful hog raisers are to-day producing 300-pound hogs in from eight to ten months and escaping care for anything besides their breeding stock during the coldest and most disagreeable of the winter months.

With care in selection of breeding stock one ought at present prices of pork realise $100 from the produce of each brood sow kept, in ten months of each year, at an expense of $35. What other farm crop will pay equally well? In recent years increased interest in hog breeding has brought the subject down to a science at least as exact as that of horse or cattle breeding, and literature on the subject has placed the science in easy reach of all, so that none need neglect hog raising because they do not know how. Experience is valuable, of course, but we believe the average beginner, to-day, with the book and newspaper information he can have at hand, can take up the business and conduct it more successfully than did anybody 40 years ago. These are some of the reasons why the farmer, small or large, should raise hogs.

JOHN COWNIE'S WAY OF FATTENING HOGS.

At the meeting of the Kansas State Board of Agriculture John Cownie of Iowa read a paper on Swine Raising, in which he gave his method of fattening old hogs. He said: My method of fattening old hogs is simply this: My hog house is kept clean and well bedded.

I have a feeding floor on the east of the hog house 16 feet wide. Every morning I go in and call the hogs to get up. They come right out into the yard, where they are watered. Get them out at the same hour every morning. In the winter they do not like to get up as early as in the summer. Like the hired hands in that respect; about sunrise suits them.

Water them out in the yard. If you do this every particle of droppings will be left in the yard. While they are out there you have a clean floor for them to feed on; crib close by. The floor should be as clean as this floor is here. Then open the gate; tell them breakfast is ready. They will come right in. In about an hour they will clean it up. If they leave any, give them a little less. If they need more, give them a little more. You can soon determine just what they will clean up, but do not give them any more.

As soon as they get through, open the door into the hog house. They will walk in, go right into their pens, clean, well fed. They will lie down and it will only be a few moments until you will hear: "Augh! a-u-g-h!" They are putting on fat then. Open the door; see that the windows are open; let them have good ventilation.

Allow them to remain there until 3 o'clock in the afternoon. Then put them out again; water them; let them on your feeding floor again, and about 4 or 4:30 open the door and let them back into the hog house. They will go in and lie there until the next morning. Then they are putting on fat.

I have fed 300 or 400 hogs that way, and I have never had any hog house but what I could lie down in this suit—just got this suit to come down here in—I could lie down in that hog house and not soil my clothes, and the man who does not keep his hogs in that condition ought to quit the business.

The hog is the cleanest domestic animal we have, and if he is properly cared for there will not be one particle of droppings or urine in that hog house. They will set one corner off into a kind of closet, and they will go back and forward to that.

Give them just room enough to lie down and no more.

It is an advantage to have your hog house divided off into pens. If you haven't enough hogs to fill up your hog house, shut off part of the space; give them just enough room to occupy and no more.

You should keep your hog house just as clean as this room. After you have fed them, clean the feeding floor. What would you think of your wife if she let the dishes sit on the table from one morning to another? Suppose the supper was served on the same dishes. You would say to yourself that you wished you had not married that woman.

I would no more think of feeding my hogs on a feeding floor that had not been cleaned immediately after the last meal than I would of eating my dinner off the breakfast dishes without washing. I have not done it for 30 years. It is a small matter. We have a wooden hoe made out of a 2x6, three feet in length; have an old saw for the lower edge. This is wide enough to sweep off three or four feet at a time. If your floor is smooth, and if you can do it immediately after feeding, you can clean it off as clean as if swept.

By having the floor three feet high on one side, you can clean it off, month after month, and the refuse will not pile up on you. No matter how wet or muddy it is, if your hogs are confined in this building their feed is always clean.

Feed your hogs corn and water. I would add a few oats and perhaps a basket or two of raw potatoes once a week, but my main feed would be corn and cold water.

With shoats it is entirely different.

When you get the hog 18 months of age you have one of bone and muscle. Then you need a fat-producing grain.

Oats and shorts make an ideal feed for young shoats.

Again, after I have my hogs fattened I would not drive them to market. I live three miles from a railway station. Whenever I have driven them that distance I have had a loss of from five to seven pounds. If I hauled them I have never had a shrinkage of more than one pound and a half to two pounds. Then I would have my cars well bedded; ride with them myself; go with them to Chicago; stay with them in the yards, water, feed and stay by them until they cross the scales.

There is money in the hog business if it is properly conducted. There is no money in it if it is not properly conducted.

WM. H. KER, Prairie du Rocher, Ill., proprietor of the Elmwood Herd of Berkshire hogs, writes us that his pigs are doing well. He has a few boars ready for service that are for sale, also a few May sow pigs. He will have some early fall pigs that will do to ship about November 1.

Both clover and sorghum hay are good for hogs, and with plenty of it will require much less grain feed than is usual.

Not more pigs so much as better pigs, is the road to success and greater profits in swine growing.

A pig neglected and stunted at the start is like the hacked and bark-peeled tree when it is young. Neither ever overcome the harm done them when starting growth.

"SWILL."

I do not like the word as used in connection with swine feeding. It is a comprehensive one, covering about all foods and substances fed to pigs, many no doubt that never should be fed. I do not like the name swill because as made on too many farms it is a filthy, sour product, writes John M. Jamison in "Stockman and Farmer." The sourness is so strong as to make it unfit for any animal to drink, not even a fit ration for hogs, and they are thought equal to digesting anything that will decay under the influence of nature's elements. Admitting that a swill slightly acid works no harm and is enjoyed by the hogs, how are we to determine its acidity? It will be almost impossible to have it twice alike after standing 12 to 24 hours, because the temperature of these hours is never the same in succession. Why not wipe the term swill off the slate in practical pig feeding, and with it let go many obnoxious morsels or mixtures that would hardly find their way to the pig trough except through the swill tub or barrel. If the swill goes, the swill barrel and tub will have no place on the farm any more, which is as it should be. It is much better that the dishwater from the kitchens go on to the compost heap than into the swill barrel unless the soap used is the old-fashioned lye kind.

A GOOD HOG TROUGH.

I made a hog trough that I like to perfection, as I can pour the slop into it without being disturbed by the hogs, and all of them can go to drinking at once and each get his share, says a writer in "Swine Advocate." It is made for eight small shoats or four large hogs. I made it eightcornered, of one-inch oak lumber, with sides slanting about the same pitch as a V-shaped trough. It has a spout down the middle, into which the slop is poured, it running out below for the pigs. The bottom is sixteen inches in diameter and has 2x4 pieces nailed all around the bottom, and sides nailed on securely, the sides being ten-inch board sawed so as to fit securely together and nailed together at corners with six-penny finishing nails, and a No. 12 wire stapled securely with small staples around the top and one around the outsides about three inches down from top. Then a stout brace is nailed from center spout about seven inches from bottom up to every other corner, or four braces. For eight large hogs the bottom should be about twenty inches in diameter, and side boards twelve inches wide and eight braces or a place for each hog to eat.

SELECTING BROOD SOWS.

Too many farmers expect the boar not only to be half the herd, but even more, so far as quality is concerned. Every sow that has been tried and found wanting should be discarded. It may be in not being good sucklers, or it may be deficiency in prolificness, or it may be because of difficulty in farrowing. It does not pay to keep a sow that only farrows three to five pigs, when on the same cost of wintering another will produce from eight to nine. Eight good pigs are about right.

In selecting a young and untried brood sow observe the following:

1. Let her have good length of body.
2. Not too closely coupled over her loins; some would term it "not too closely ribbed." We want roominess in the sow.
3. Let her be broad in her forehead, for she must be an intelligent animal.
4. She also should be full eyed for the same reason.
5. She should stand well on her feet, and be not too low, else her udder will trouble by dragging over even low obstructions.

She should also be broad over the hips so as to insure the easy delivery of her young, and in addition have twelve teats well placed, if possible.

Always select such sows from prolific mothers, and good, careful mothers, too, that have been good feeders and milkers; at the same time bearing in mind the breeding from the same points of excellence on the side of the sire. These sows, so selected, should grow and not fatten.

A great point in raising pigs for the pork market is to have your sows bred as near together as possible, so that the fattening herd will be of about same age and size.

It makes quite a perceptible difference when it comes to selling a bunch of fat hogs to have an even lot in size. The brood sows should be fed a growing and not fattening food.—Exchange.

The Shepherd

THE ANGORA A BENEFACTOR.

At the request of Secretary F. D. Coburn of the Kansas Board of Agriculture, Mr. R. C. Johnston, of Lawrence, read an interesting paper before the late annual meeting of the Board, on the subject of Angora goats. Mr. Johnston is well qualified to intelligently write of these animals, as he has been breeding and handling Angoras quite extensively for some years. He has sublime faith in their ability to adapt themselves to varied conditions, and to do much toward transforming otherwise waste places into profitable areas. He says in part: "The Angora grows to the same size as sheep, but does not mature so rapidly. A six-months-old lamb will weigh more than a kid of the same age with equal care; therefore, the goat is not as good to raise for the early market; but this is more than offset by the fact that it carries its lamb or soft joint longer than a lamb does, and its life is so much longer than that of a sheep. It is a prolific breeder and a productive shearer until twelve and fourteen years old. It lives and thrives in any climate or country where sheep live and prosper, no matter how hot or cold. It readily adapts itself to the surrounding conditions, from the rich valley to rugged mountain wastes. All the shelter it needs in this climate is an open shed, facing the south, which it can go under to protect itself from the cold rains and snow of our winters. The rain or snow freezes on its long, silky hair and forms a mass of ice, which chills the goat. Keep it dry, especially after shearing, and it will stand any amount of cold weather. They feed and do well during the winter on cornfodder, straw and coarse hay, with a little grain during March and the first of April to strengthen them for the kidding season of May. A goat abhors filth and dirt. While they eat every kind of food, it must be sweet and clean, with fresh, pure water to drink. They will only drink dirty, stagnant water when compelled to by extreme thirst.

"It is not best to have your does kid too early in the spring, as the kids are liable to chill and die during cold, wet weather, and the does do not milk so well, and are more liable to disown their kids. Better wait until May, warm weather and plenty of grass. They require the same care and attention during the kidding season as sheep during the lambing season. The high grades and pure breds are more prolific than sheep, raising 90 to 110 per cent increase. They are very hardy, having lots of sense, are good rustlers, and will not starve if there is anything in the neighborhood to eat. They seem just as happy gnawing the bark off a dogwood sapling as barking your choicest apple tree. They feed in flocks, and do not scatter over the pasture like sheep. When alarmed, they will bunch together to defend themselves. They are browsers, not grazers, and prefer weeds and brush to grass. They eat the leaves off every tree and brush that grows in Kansas, and, not content with the leaves, they want the bark also. They eat every weed that I know of, except mullen and burdock. They seem 'tickled to death' when they strike a patch of jimson-weed, and are perfectly happy in a bunch of smartweed. They watch and patiently wait for the thistle to put forth its bloom, so that they can enjoy that rare morsel. Buckbrush, which is destroying so many of our fine pastures, is their delight; in fact, goats are ideal brush exterminators; they do it at a cash profit instead of a costly outlay. One writer speaks of them as 'picking gold off the bushes.'

"They are always sure of a good living, for no matter how dry or wet a season may be, it always produces weeds. They will condescend to eat grass when there are no weeds or brush in sight. After the frost has killed the weeds and leaves, they feed during the winter, as long as it is not covered with snow, on the blue grass which grew undisturbed under their feet during the summer. Horses, cattle and sheep will feed after goats in the same pasture, while goats will feed on that which other animals will not touch. One need not sell any of the stock already owned to make room for the Angora goat; the farm is able to take care of that much more stock, and render that much greater income. They are a vegetable scavenger. Hence their value in farm economy, in converting into money the weeds and brush which the farmer every year spends time, labor and money to get rid of, at the season of the year when time is most valuable. This makes the cost of raising the Angora almost nothing.

"They make the richest fertilizer from the foliage and deposit it on the highest and poorest spots of the farm, while horses and cattle fertilize the richest part, where the grass grows.

"Thus, we find the Angora goat reclaiming thousands of acres of waste land in every state in the Union and converting them into tillable fields or productive pastures, at the same time making millions of pounds of wholesome meat to feed and millions of pounds of fine mohair to clothe the people. Being a very hardy, self-reliant animal and a browser, one will soon find his hilly and rough districts, which are to-day of no value whatever to any other industry, filled with this useful animal. They are comparatively free from disease. A sheep fence will hold them.

"They are shorn in the spring, at the same time and in the same manner as sheep, but be careful to keep them out of a cold rain for a week or two after shearing. The fleece of mohair weighs from two and one-half to four pounds on average good goats, while extra-fine, pure-bred goats will often shear eight or ten pounds, worth from 30 to 45 cents a pound on the market, according to the grade and care in handling. The skin of a high-grade Angora has double the value of a sheep's pelt, because of the furs, rugs and kid-leather robes manufactured from them, while the skins of the lower grades sell at about the same price as pelts.

"The Angora does are not as good milkers as the Maltese and Swiss goats, but they give plenty for rearing their young. They are kind and watchful mothers, and will fight for their kids. These goats are profitable animals in the feed lot; give them like conditions and the same grain and they will take on flesh very rapidly, and fatten in one-fourth less time than sheep. They respond very quickly to good care. At the final test of all domestic animals—the butcher's block—the Angora is not found wanting. Their flesh in summer, when browsing, has a very delightful flavor, between venison and mutton, which gives the name 'venison' to their meat. In winter, when fattened on grain, it loses that flavor, but acquires a mutton flavor. It has none of that 'woolly' taste of mutton which is so objectionable to many people. Thousands of them are killed in our packing houses and sold as 'well-dressed mutton.' Only an expert can tell the difference, as their carcasses appear the same when hanging in the market. They will dress out a larger per cent of meat than sheep; hence are much more valuable, and their meat is more juicy than mutton and has a finer flavor."

THE GENIUS OF SHEPHERDS.

A close observer of men and affairs once said: "Genius is but application intensified." Of course this view of genius pervades each walk and vocation of life, says "Wool Markets and Sheep." It dominated Jay Gould in his day and is still the ruling power over John D. Rockefeller and Andrew Carnegie, as well as thousands of other successful men. Someone says that those men represent railways, Standard oil and steel and must not and cannot be brought into comparison with some of those branches conected with agricultural pursuits. In answer to such ideas we draw some inspiration from one of those interesting and instructive letters written by Frank G. Carpenter, dated Sydney, Australia, which is now lying before us as it appears in a newspaper of recent date. This letter in particular is a most instructive one, in that it sets forth the public enterprise of the flockmasters of Sydney by reaching out for rams of the very best quality, notably showing a preference for American Merinos. The point, however, which bears particularly on the genius of application intensified is the story of the sheep king of Sydney, Samuel McCaughey, who now owns more than a million sheep and who is said to possess more than an acre of land for every head of sheep. When Mr. McCaughey landed in Australia, in 1826, he had practically nothing. In the first years of his career he failed. He then made a fresh start with a small flock, and from year to year continued adding gradually to his holdings, until now it is considered he has more sheep than any man in the world. This in substance is but a repetition of the old, old story indicative of the value of stick-to-it-iveness. That trait in itself is highly essential to every man who desires to engage in the sheep business. With a fair amount of sheep sense and business tact it will land him comfortably on "easy street."

In perusing this interesting letter we cannot but admire the persistency with which the noted correspondent credits the Australian sheep raisers in introducing fresh blood to improve their flocks and the good effect this public-spirited action has had on the Australian flocks wherever it has been introduced. In 1886 Mr. McCaughey imported 120 ewes and 40 rams from Vermont to Australia. The following spring he came back to America and purchased 120 sheep. These sheep have been distributed through his immense flock, and he thinks the result of crossing them on Australian sheep has added at least one pound to the weight of fleece. One pound extra weight to the fleece of wool on a million sheep, even at 14 cents, adds considerably to the income. This idea demonstrates the value of improvement—gradual, persistent improvement—of flocks. Our flockmasters want tariff for protection, but in this connection we wish to say that improvement of our flocks is a higher, surer and more lasting source of strength to our sheep industry than even a protective tariff. These remarks are not made with a view to raising a controversy over debatable ground, but in order, through side lights, to give a bird's-eye view of what the genius of our Australian competitors are doing, and by contrast to awaken our own flockmasters from the lethargy of inactivity. Sheep raising in America and in Australia does not have much in common in the methods in vogue. Australia, however, has thousands of able sheepmen to our hundreds, and they are doing everything in their power to improve their flocks and meet the requirements of the present day and are still looking further ahead. Can the genius of our American flockmasters not be awakened so that in sheep raising they may assume their proper position among the nations of the world? To do this we need to invoke the genius of shepherds or go to work and create this genius for ourselves. The latter would seem to us to be the more congenial way for Americans to accomplish the desired end.

FLOORS FOR SHEEP PENS.

Usually no other floors are wanted for sheep sheds than such as are composed of earth; that is to say, on the supposition that the location is dry. Sheep do not, of course, disturb the surface of an earth floor as pigs frequently do, nor do they make holes in it as cattle do by treading when the latter are tied in the stall, says Prof. Shaw in the "Farmer." When litter is strewn on such a floor the sheep tread it firmly. If supplied with litter with sufficient frequency it makes a nice bed for them, but care should be taken to supply the litter from day to day as needed in order to keep it fresh and clean, and to keep away all unnecessary subsoil moisture. Such a bed is at least fully as good as though it were on a concrete floor, and if the sheep are well supplied with litter, it will be all absorbed by the bedding. There will be no more waste of urine than if the floor were wood. Manure thus made in sheep pens is of excellent quality. It has not only all the solids and liquids which have been voided by the sheep, but these are also nicely blended. The manure is also impacted by the sheep so that the volatile parts are not readily lost. There is some danger, however, that sheep manure may take injury through fire fang. It is somewhat deficient in moisture. Because of this danger, sheep manure should not be allowed to lie too long before applying it to the land. Wherever white mould appears in the manure, it is an indication that it is losing more or less of the nitrogenous substance in it. The aim should be to avoid such loss, as the nitrogen is the most valuable ingredient in the manure.

HOW OFTEN SHOULD THE SHEEP BARN BE CLEANED?

This is a question often asked but rarely satisfactorily answered. However often it may be cleaned it is advisable and important that this work be attended to just previous to the commencement of the lambing season, and more than this, it is advisable to rush the work through at as lively a rate as possible when once begun, as the ewes must necessarily suffer more or less from the unpleasant odors arising from the manure while such work is in operation. After the manure has been removed it is a good plan to scatter some air-slaked lime over the floor. This makes a good disinfectant, and a good deodorizer. Many flockmasters do not remove the manure from their sheep barns oftener than once a year. While this method may work satisfactorily in the case of very small flocks, no one setting any value on a really good stud flock would be liable to follow this plan. Just as soon as the flock goes to pasture the barn should be thoroughly cleaned out, or the manure will depreciate in value from the escape of ammonia from it.—Wool Markets and Sheep.

When ewes become too old it is best to sell them off in the fall to feeders of sheep, for there is no money in keeping old ewes on the range for breeding purposes. If a man has good alfalfa pasture old ewes can be brought in and kept two or three years longer than if required to rustle on the short grass with the other sheep.

If the land is foul the sheep will clean it up more cheaply than any other laborers you can employ.

The Markets

WHEAT—Cash Market—Sales of No. 2 red at 71¼c this and 71⅝@72c E. side; No. 3 red quotable at 70@71c and No. 4 at 69¼c skd. in elevator; 71c for No. 2 red and 1c to 3c less for No. 3 and No. 4; hard winter at 69@69½c for No. 2 and 68c for No. 3; outside rates for Kansas.

CORN—Cash Market—No. 3 mixed or better selling at 1c under No. 3 white or better at Dec. prices.

OATS—Cash Market—No. 2 sold at 38c; No. 3 at 37¾c; No. 2 white at 39¼c for fancy E. side; No. 4 white at 38@38½c.

RYE—No. 2 59½c this side, 59c E. side.

BARLEY—Quotable at 59lb63c, according to weight and color.

BRAN—E. side country points 78c; 100-lb. sks. 80c; on trk. 80c; bulk 78c. This side 82@85c at mills.

SHIPSTUFF—95@98c.

HAY—Timothy $14@14.50 for choice, $13 for No. 1, $10@11 for No. 2; clover $10@11 for No. 2; clover $10@11 for No. 2 and $12 for No. 1; clover-mixed ranges at $9 to $11.50; prairie, this side, $12@13.50 for No. 1 and $8@10 for No. 2; alfalfa $12@13.50.

PRICES ON CHANGE.

The following tables show the range of prices in future and cash grains:

	Closed Saturday.	Range Monday.	Closed Monday.
Wheat—			
Sept	..70⅛ n	....@....	70⅝ n
Dec	...71⅛@⅜ b	71⅛@71⅝	71⅜ b
May	...74⅝ b	74½@75	73⅝
Corn—			
Sept	..57 n	....@....	56⅞ n
Dec	...57½ b	56⅞@57⅝	57¼@⅜ a
May	...59⅜@½	59¼@59⅞	59¼ a
Oats—			
Sept	..37 n	....@....	37 n
Dec	...37¼	....@....	37 n
May	...39¼ a	38⅞@39⅛	39

Cash wheat, corn and oats ranged:

	Range Monday.	Range Saturday.	Range Last Yr.
Wheat—			
No. 2 red	....71¼@72	71¼@72	75¾@79
No. 3 red	....70¼@71	70¼@71	74 @75½
No. 4 red	....69 @70	69 @70	68 @73
No. 2 hard	..69¾@69	69¼@....	72 @72½
No. 3 hard	..68¼@68½	68¾@....	69 @71½
Oats—			
No. 2	.......58 @....	58½@....	40 @....
No. 2 white	.59 @59½	59 @59½	41½@42¾
No. 3 mixed	.57 @58	58 @58½	39½@39¾
No. 4 mixed	.56½@55	57½@58	....@....
No. 3 white	.58½@59	58½@59	41 @....
No. 2 yellow	.58 @58½	58½@....	40 @40½
No. 3 yellow	.57½@58	58 @58½	....@....
Corn—			
No. 2	.......37⅜@38	38 @38½	23¼@24¾
No. 2 north	.38 @....	38½@....	....@....
No. 2 white	.39 @39¼	39 @....	27 @28
No. 3 white	.38½@38⅜	38¼@39	25½@26½
No. 4 white	.38 @38½	38 @38½	25 @25¼
No. 3 mixed	.37 @37⅜	37½@38	23 @....
No. 4 mixed	.36½@37	37 @37½	....@....

Missouri and Illinois—Medium combing, 16½@17c; medium clothing, 16¼@16½c; braid and low, 16½@16c; burry and clear mixed, 14½@15½c; slight burry, 13c; hard burry, 11c; light fine, 13½@14½c; heavy fine, 10½@11½c. Arkansas and Southern—Medium (fleeces), 16½c; medium (loose), 15½c; burry, 11@13c; hard burry, 9½c. Tub-washed—No. 1, 24c; No. 2, 20@22c; slight burry, 15c; hard burry, 12@13c. Angora goat hair—Long, 14@15c; short and low, 11@12c; burry and cotted, 5@6c.

COTTON—Local spot quotations—Ordinary, 6½c; good ordinary, 6¾c; low middling, 7⅝c; middling, 7⅞c; good middling, 8½c; middling fair, 8⅝c.

EGGS—Fresh in light offering, fair demand and steady, at 16c loss off. Inferior less.

BUTTER—A healthy feeling prevailing, but little doing, save in choice grades of creamery—that was selling fairly to retailers. Offerings light. Creamery—Extra, 22c; firsts, 19@20c; seconds, 17@18c. Country—Choice, 11c; poor to fair, 9@10c, grease, 4c. Dairy—Extra, 16@17c; firsts, 14@15c. Ladle-packed—Extra, 15c; firsts, 13½c.

CHEESE—Jobbing: Twins at 10¾c; singles, 11c; daisies, 11½c; Y. A., 11¾c; long horns, 11¾c; N. Y. large, 10½c; N. Y. small, 11c; limburger, 11½c; Swiss, 16c; brick, 11½c.

LIVE POULTRY—Quiet. Chickens in light offering and in limited demand, shippers being out at over 7½c for young and 7c for old, while buying for the local trade for the week has not yet commenced. Turkeys, ducks and geese steady, though in very small movement. Spring chickens, average receipts, 7½c. Chickens—Hens, 7c; roosters, 3½c. Turkeys—Old, 7c; young, good dressing, 7c; less than 6 pounds, 5c. Ducks—White, 5½c; dark and plucked, 5c. Geese—Full feathered, 5c. Live pigeons, per doz., 60c.

PEACHES—Receipts good; prices easy; home-grown at 15@45c per bu. box, 10@40c per ½-bu. basket, as to quality; fancy Elbertas higher, selling from 70c@$1.20 per bu. box; Missouri 1-3-bu. box 10@25c; Illinois 4-basket crate 20@35c.

NEW APPLES—Receipts fair; market unchanged; sound, well-packed quote range 75c@$1.25 for poor to $1.25@1.75 per bbl. for fair to choice smooth and $2@3 for fancy varieties; home-grown windfalls 35@50c per bbl.; at $1.75@2 per bbl. for fancy; river stock $1.25@1.40 per bbl.

PEARS—Firm for good stock, with fair offerings; home-grown common varieties 5@35c per ½-bu. basket, and at $1.25@1.40 per bbl.; Keifers $1.50@2 per bbl.; Bartletts $3@3.25 per bbl.; Duchess $2@2.25 per bbl.

PLUMS—40@45c per ½-bu. basket for damsons.

GRAPES—Easier at 22@23c for Ohio Delaware in 8-lb. baskets; pony Delawares 15c; Elviras and Marthas 10c per 8-lb. basket; Ohio Niagara 8-lb. baskets 18c; ponies 10@11c; Ives 8-lb. baskets 12c; Wordens 13@14c; Ohio, Michigan and New York, and Martha 14c per basket.

POTATOES—Higher; Northern and Eastern 50@70c per bu., bulk.

ONIONS—Choice near-by yellow 80@85c; red 35@95c; white globe $1@1.10 per bu.

SWEET POTATOES—New home-grown Bermuda 50@75c per bu. loose; Virginia red $2.25; Virginia yellow $2.

BROOM CORN—Owing to lack of offerings, there are few or no sales. Market undoubtedly firm, and the brush is wanter. Quotable per ton, nominally, at from $70 for poor to $100 for choice.

GRASS SEEDS—Timothy firm at from $4.75 for poor to $5.10@5.20 for fair and $5.30 for clean bright—grade prime worth even more. Clover quiet but steady at from $5 for poor up to $9 for the best of the current receipts; redtop—fancy export at $10, fancy otherwise at $6 to $9. Sales 143 sacks alfalfa and small lots redtop on p. t.

SUNFLOWER SEED—Prime white Russian at $2 per 100 pounds nominally.

CASTOR BEANS—Nominally at $1.35 per bushel for prime. Smaller lots and inferior less.

DRIED FRUITS—Offerings larger and movement free; but values are still drooping and in buyers' favor—lower on evaporated goods. The offerings included 2 car loads and 45 sacks evaporated rings apples, 1 car load evaporated chops and peelings, 275 packages sun-dried quarters apples, 75 packages sun-dried peaches, and small lots various kinds—all sold on basis of appended quotations: Apples—Evaporated rings at from 5c for inferior to 5½c for fair to 6c for choice and 6¾c for fancy, evaporated quarters at 5@5½c; bleached chops at 1¼c, do peelings at 1¼c; sun-dried quarters—fancy at 4½c, choice at 4¼c, fair at 4c, dark and inferior at 3@3½c. Peaches—Sun-dried, 1½@2c.

WHITE BEANS—In a small way from store, per bushel: Hand-picked pea at $2.20; machine-picked and screened at $2.10; car lots on track much les. Lima beans at 8¼@8½c per pound; California pink at 3½c.

HONEY—Comb—Dark at 6@8c; bright amber, 10@11c; white clover, 11½@12½c—inferior and broken less. Extracted and strained—Southern in barrels at 4c to 4½c; cans, 4½@5c; California more.

BEESWAX—Quote at 26½c ped lb. for prime.

SHEEP PELTS—Full-wool pelts nominally 30@40c, according to amount of wool thereon; lamb at 15@30c; shearlings at 5@15c; dry stock, fallen, etc., 7½c per lb.

ROOTS—Ginseng at from $4.25 to $5; lady slipper at 6c; seneca at 28c; pink at 14c; golden seal, spring dug, 46c; heavy, fall dug, 48c; May apple at 2½c; wahoo—bark of root 8c; bark of tree 2½c; snake at 30c; black at 4c; angelica at 4c; blood 2¾c; blue flag 3c; skullcap leaves 5c; sassafras bark 4c; wild ginger 4c.

LIVE STOCK

HORSES—The supply on the horse market was a moderate one and altogether too small for the good, brisk demand which prevailed. It included a few choice offerings, but the general quality had a tendency toward a medium grade. The market was on a very active and satisfactory basis and the week opens in decidedly favorable condition. The Eastern demand and the other elements which absorb heavy horses were of good tone, but the most important factor in the activity of movement was a broad and lively demand which emanated from the South. This request was for a varied class of offerings, from common, little chunks to choice drivers, and had, consequently, a very strengthening effect on the classes which were firm. Southern horses stronger and plain, common horses about steady with the previous week.

Horse quotations:

Heavy draft—Common to good, $125@160; choice to extra, $175@200. Chunks, 1150 to 1350 pounds—Fair to good, $70@90; good to choice, $100@120. Coach horses and cobs—Fair to good, $135@175; choice to extra, $200@500. Horses for the South—Small, light drivers, fair to good, $30@45; choice to extra, $50@65; southern drivers, large, $85@101. Export chunks, 1200 to 1500 pounds—Plain to good, $85@100; choice to extra, $110@130. Business drivers—Fair to good, $85@110; choice to extra, $125@150. Saddlers for southern use—Fair to good, $75@90; choice to extra, $100@160; fancy gaited and New York saddlers, $150@300. Inferior horses—Common, small plugs, $20@30; heavy work plugs, $40@60.

MULES—About 8 or 10 carloads in all of mules arrived, but some being from the range and others consigned direct to dealers, left the commission supply short. Sifted down, the latter embraced not more than a couple of carloads on the forenoon market. The supply was totally in keeping with the dull market which prevailed during last week and was not unexpected. Business as a whole was quiet. The commission salesmen declared that the early market had shown no active symptoms and that the supply was really too small to venture an opinion of the market's condition. Among the dealers the market was likewise quiet, very little demand from the South or from any other source appearing on the surface, although the dealers may have had a few orders. Consequently the week opens practically steady with last week's close.

Mule quotations (for broke mules, 4 to 7 years old):

14 hands, extreme range......	$ 50.00@ 70.00
14 hands, bulk of sales.......	50.00@ 65 00
14½ hands, extreme range....	55.00@ 80.00
14½ hands, bulk of sales......	55.00@ 70 00
15 hands, extreme range.......	75.00@110 00
15 hands, bulk of sales.......	80.00@ 95.00
15¼ hands, extreme range.....	90.00@130.00
15½ hands, bulk of sales......	95.00@110.00
16 to 16½ hands, extreme range	120.00@160.00
16 to 16½ hands, bulk of sales	140 00@150 00

ST. LOUIS NATIONAL STOCK YARDS.

Market Report Furnished by Evans-Snider-Buel Company.

Receipts in native division for week have been liberal, but the percentage of good, thick, fat cattle has been light. Prices on best grades ruled steady, while medium and fair to good kinds closed 20c to 35c lower than week ago. Best here sold for $6.35, and several loads brought the price, but were not what could be termed strictly choice or fancy. Receipts included a good many Westerns. Best weights, where they were fat, sold fully steady with last week, but the light weight and common kinds were considerably lower. Receipts of stockers and feeders were moderate; prices on best grades were steady, while common and medium kinds were lower. Canning grades sold fully 10c to 15c higher than last week. The demand was good. The bull market remained about steady, with a little better inquiry for stocker bulls. Milk cows with calves were in strong demand at fully steady prices as compared with advance noted in our last correspondence, but common and medium kinds were no more than steady. Top of veal calf market was $6.00, $4.75 to $5.75. Quotations based on present conditions of the market are as follows:

Best native steers, strictly fancy cattle, 1,300 to 1,600 pounds average, $5.85@6.35; choice export steers, 1,300 to 1,600 pounds average, $5.60@5.80; good shipping and export steers, 1,300 to 1,600 pounds, $5.35@5.55; fair to medium shipping steers, 1,300 to 1,450 pounds, $4.90@5.25. Steers, 1,200 to 1,290 pounds average, full range, rough to best, $4.45@6.00, bulk of sales at $5.50@5.85; steers, 1,000 to 1,190 pounds average, full range, $3.60@5.90, bulk of sales at $4.50@5.35; steers weighing less than 1,000 pounds full range $2.65@5.35, bulk sold at $3.60@4.75. Feeding steers, fair to choice, 800 pounds and upwards, $3.35@4.15, the bulk at $3.50@3.75; common to choice stockers, $2.00@3.15, bulk at $2.75@3.10; stock heifers full range $2.25@3.20 and the bulk at $2.50@2.90. Fancy native heifers sell at $4.60@5.00, but there have been very few on the market; choice native heifers sell at $4.25@4.50; good native cows and heifers sell at $3.50@4.25; medium cows at $2.60@3.35; fair cows $2.00@2.45; inferior, light and old cows $1.00@2.25; the bulk of the southwest cows sold at $2.15@2.35 and the bulk of all the cows sold at $2.60@3.25. Canning cows sell at $1.00@2.25. Veal calves, full range $2.75@6.00 per 100 pounds, bulk at $5.00@5.75 per 100 pounds. Heretics and yearlings sold at $2.25@3.50 per 100 pounds, with the bulk at $3.00@3.25. Bulls, full range $2.25@4.25, bulk of sales $2.60@3.50. Stocker bulls sold at $2.75@4.00, the bulk at $3.00@3.50. During the week the milkers sold at a full range of $21.00@48.00 per cow and calf, the bulk of sales being at $30.00@34.00.

SOUTHERN CATTLE—Receipts of Texas cattle this week were practically the same as last. Our market on steers has ruled steady all week, and closes the same as last Friday. Receipts of cows have been liberal, but prices close 10c to 15c higher than last Friday, the biggest advance being on canning grades. Receipts of bulls have been fairly liberal, and they are selling 5c to 10c higher. Receipts of calves have been heavy, and prices are fully $1.50 per head lower this week than last, the biggest decline being on the half-fat kind. There seems to be a good demand for all fat cattle. While we don't look for prices to get much better, we don't believe they will get any lower.

During the week Texas and Indian Territory steers sold at $2.85@4.20, bulk at $3.45@3.80; cows and heifers at $2.00@3.25, mostly at $2.45@2.75; stags and oxen at $2.50@3.00, bulls at $2.25@2.60, and calves, 100 to 300 pounds, at $3.00@9.25 per head, with the bulk at $7.00@8.25. Arkansas and Tennessee steers, 530 to 740 pounds average, sold at $2.50@3.25, cows and heifers at $2.00@3.15, the bulk at $2.40@2.50 and bulls and oxen at $2.00@2.25.

HOGS—Monday proved to be the best day of the week, $7.37½ being the extreme top for prime heavies, which was the high point for the past eight years. Tuesday, Wednesday and Thursday, under liberal receipts, a decline of 20c to 30c was forced. Under moderate receipts Friday, the market ruled strong to 5c higher. Receipts were light Saturday, and the market ruled steady. A good clearance was made at the following values: Butchers and packers, $6.80 to $7.10; Yorkers and shippers, $6.65 to $7.00; heavy pigs, $5.75 to $6.75; light pigs, $5.25 to $5.75; rough heavies, $6.00 to $6.50.

SHEEP—Receipts for week were farily liberal, and a net decline of 10c to 15c was forced. Bulk of the mixed lots of fat ewes and wethers sold from $3.25 to $3.40, best lambs $4.25 to $4.50, stockers $2.00 to $2.25, best bucks $2.00 to $2.25.

Monday, Sept. 30, 1901.—CATTLE—Receipts in native division were light today, and the market steady to strong on best offered for sale. There were several loads of pretty good grass Westerns, which sold for a stronger price than they would have brought on last week's close. Chicago reported 21,000 head, market steady to strong. There was a liberal run in the Quarantine division; prices opened strong, closed easy.

HOGS—Receipts moderate; market strong to 5c higher on best, steady on others.

SHEEP—Receipts moderate, market shade easier than last week's closing prices.

MISSOURI WEATHER AND CROPS.

The U. S. Department of Agriculture, Climate and Crop Bulletin of the Weather Bureau, Missouri Section, for the week ending September 30, 1901, is as follows:

The week just closed averaged decidedly warmer than usual throughout the state with a high percentage of sunshine. Quite heavy showers fell in a few of the southwestern counties on the 25th and 26th, and moderately heavy rains are reported in a few of the northern counties, but over much the greater portion of the state the rainfall, up to Saturday evening, was very light, many of the southeastern counties receiving none.

FALL SEEDING.—Special reports regarding fall seeding indicate that in a majority of the northern and western counties one-half to nine-tenths of the wheat crop has been sown, with the soil in excellent condition, and the early sown is up and looking fine, but in many of the east-central and southern counties the ground has been too dry and little seeding has been done. In some of the eastern and southern counties it is feared that wheat that has sprouted will perish unless rain comes soon. In many localities in the central and southern counties little more than half the land intended for wheat has been plowed. Reports indicate that, with favorable weather conditions, an unusually large acreage of wheat will be sown in most sections.

PASTURES are improving in a majority of the northern and western counties, and in some localities in the western and extreme southeastern counties they are reported in good condition; elsewhere they are still dry and bare. In some sections considerable rye has been sown for pasturage.

CORN CUTTING is generally completed, except in some localities where recent rains have kept the latest corn green.

COTTON is opening rapidly in the southeastern counties and picking continues under favorable conditions, but the crop is generally light. Boll worms have done considerable damage in Dunklin county.

LATE POTATOES are reported a complete failure, except in a very few counties.

SORGHUM grown for molasses is generally very light and much of it of poor quality. In a few counties, however, a fair to good crop will be secured. In some sections the crop was considerably damaged by the recent frosts. In some of the eastern counties turnips are dying from lack of moisture.

LATE APPLES have improved in many of the western and some of the eastern counties, and in a number of the principal apple growing counties a good crop will be gathered. In many localities, however, they are still falling badly.

A. E. HACKETT, Section Director.
Columbia, Mo., Oct. 1, 1901.

E. E. AXLINE will, on Oct. 21, 1901, sell at Oak Grove, Mo., 60 high class Poland-Chinas, consisting of 20 choice fall of 1900 gilts, open, sired by A.'s Chief, a grand boar, by Chief Tecumseh 2d; also 20 spring gilts and 20 spring boars of 1901, sired by R.'s Perfection, one of Chief Perfection 2d's best sons, and Chief Eclipse, Mo. Black Chief's greatest son. They are all out of splendid sows of choice breeding. Mr. Axline has always made good consignments to his sales, and this will be no exception to his former sales. There are some high class animals in this offering and no culls of any kind. Look up his advertisement and write him for a catalog. Send bids to F. A. Scott, in care of Mr. Axline. Don't forget the date—Oct. 21.

MISSOURI CROP NOTES.

MARION CO., N. E. MO.—Parts of this county were favored with sufficient rain to mature a good corn crop; in other parts it is an entire failure.
Sept. 28. H. C. SCHEETS.

GENTRY CO., N. W. MO.—There is plenty of feed for stock. Corn was all cut and we have plenty of hay. More wheat will be sown this fall than usual.
Sept. 27. ALEX. GREENWELL.

DADE CO., S. W. MO.—We have no merchantable corn or potatoes. Apples where sprayed are a good crop, but neglected orchards reduce the average.
Sept. 28. O. H. BARKER.

WASHINGTON CO., S. E. MO.—Everything in this county was ruined by the drouth, except wheat, which was about half a crop. The millers are now shipping in the wheat they are grinding.
Sept. 26. W. B. RAMSEY.

TEXAS CO., S. E. MO.—Corn cutting began in the last week of August, from one to two weeks' earlier than usual because of the chinch bugs and dry weather. The fodder is keeping well and farmers are taking good care of it.
Sept. 27. J. B. SHERRILL.

REYNOLDS CO., S. E. MO.—Corn is all cut and in the shock; the yield is very light. Some wheat has been sown, but plowing is at a standstill, as the ground is too dry to plow. It is reported that some early sown wheat is dying from the effect of the hot, dry weather.
Sept. 26. W. H. SHY.

COLE CO., CEN. MO.—The weather continues dry and is retarding wheat sowing. Pastures are bare. The frost of last week killed or stunted all garden truck and there will be suffering before spring in this section. H. B. BODE.
Sept. 26.

SCHUYLER CO., N. E. MO.—Corn is light and chaffy on upland, medium on bottom land. Wheat was up to standard. Oats were well filled and good weight, but too short to harvest. Rye was good; potatoes almost a failure, sweet potatoes very small. Tobacco almost a failure. Grass is starting nicely. Ground is in good condition for wheat.
Sept. 27. MONROE FUGATE.

JACKSON CO., N. W. MO.—I have resided in this county for 49 years, and we have this year the shortest corn and oat crops since 1854. Apples will not make more than half a crop. Irish potatoes will not make the seed. There will be an increased acreage of wheat sown.
Sept. 28. A. G. WILLIAMS.

MILLER CO., CENTRAL MO.—The weather continues dry, retarding the germination of wheat that has been sown. Pastures are dried up and water is very scarce. Frost has bitten late corn, millet, sorghum and cow peas. Wheat sowing has been checked until it rains.
Sept. 28. W. C. HOWELL.

CEDAR CO., S. W. MO.—There will be about one-fifth of a corn crop, as there is some corn in the bottoms, but on the upland it is a total failure All the fodder has been cut and saved for feed. Berries are badly damaged by drouth and there will be a light crop of them next year.
Sept. 28. A. F. RETHEMEYER.

MARIES CO., E. CENTRAL MO.—Irish potatoes are nearly a total failure, as are also sweet potatoes. Turnips from some cause are rather thin on the ground—either bad seed or dry weather. I do not think corn will make a fourth of a crop in ear, yet the fodder is excellent, and has all been cut for feed. If it is a cold winter, I fear feed will be short.
Sept. 28. L. N. RAMSEY.

ANDREW CO., N. W. MO.—Corn is yielding a little better than it was supposed it would. Late rains have brought forward the pastures finely. Wheat sowing is progressing well.
Sept. 26. W. J. BEALE.

Corn has improved greatly since last report and a great deal of it has been cut. None was injured by frost.
Sept. 27. W. C. FLEMING.

JOHNSON CO., W. CENTRAL MO.—Last month corn started to grow and promised great improvement, but subsequent heat and lack of moisture cut it off again. There are good fodder and turnip crops. There are some forage crops, but frost killed fully half of them. It is raining now and late pastures are improving. Not one acre in ten of oats was cut.
Sept. 28. J. C. BAILE.

LINN CO., N. CENTRAL MO.—There are a few farms that have a moderate crop of corn on bottom lands, but the great bulk of the corn crop in this county is a failure. The most of it has been cut up for fodder. The wheat crop is good, but I never saw as small an acreage in comparison with other crops, and as a result it cuts no figure scarcely in relieving the situation.
Sept. 28. WILLIAM SISSONS.

LINCOLN CO., E. CENTRAL.—The weather continues extremely dry and there are no fall pastures of any consequence. Farmers are all feeding their stock. Stock water is very scarce. Wheat sowing is about half finished. Many fields have not enough moisture to germinate the seed. Many stock hogs and young cattle have been sold on account of scarcity of corn. A. BROWN.
Sept. 28.

CRAWFORD CO., S. E. MO.—Practically every hill of corn has been cut and we have had fine weather for curing the fodder; but it is the writer's opinion that many horses will die this winter from eating this fodder because of the fact that most all of the late corn made shoots that did not mature grain, and these shoots are full of worms. It is the worms that do the mischief when eaten by the horses. Wheat was of exceptional good quality and is keeping well in the bins—no weevil or ether vermin has attacked it. J. F. MARSH.
Sept. 26.

A LIVE STOCK BOOK FREE.—We call the attention of our readers who have not yet secured a copy of the International Stock Food book to the condition on which one can be obtained. It is sent free upon answering FOUR questions that are asked in their advertisement in this issue. The book contains 183 large colored engravings of horses, cattle, sheep, hogs, poultry, etc., with a description of the different breeds. It is worth sending for. Read the advertisement and write to International Food Co., Minneapolis, Minn.

FARMERS' INSTITUTE.

Monroe City, Mo., Sept. 27.—A farmers' institute, attended by farmers of Monroe, Marion, Shelby and Ralls counties, met in session at the City Hall yesterday and finished their work this evening. The institute was well attended, especially by ladies.

G. W. Waters delivered an address on the "Lessons of the Drouth;" N. F. Murray, president of the State Horticultural Society, lectured on "Commercial Orcharding and Farm Orchards;" C. H. Eckles, professor of dairy husbandry, Agricultural College, lectured on "Care of Dairy Herds and Profits in Dairying;" C. D. Lyon of Higginsport, O., devoted his allotted time to "Fertility of Soils, Wheat Growing and Corn Culture;" H. A. Gass discussed "Nature Study Leading Up to the Study of Agriculture in the Public Schools;" Doctor D. F. Luckey, State Veterinarian, took up the leading features of "Preventing Contagious Diseases, Vaccination of Live Stock." During the series of lectures many valuable illustrations were used.

"INCURABLE" HEART DISEASE SOON CURED.

During the last two or three years very great improvement has been made in the treatment of diseases of the heart. Cases formery considered incurable now readily yield to new remedies. The well known specialist in treating heart diseases, Franklin Miles, M. D., LL. B., of Chicago, will send $2.50 worth of his new Special Treatment free to any of our afflicted readers.

This liberal offer is for the purpose of demonstrating the unusual curative powers of his Treatments for heart troubles, such as short breath, pain in the side, oppression in the chest, irregular pulse, palpitation, smothering spells, puffing of the ankles or dropsy.

They are the result of twenty-five years of careful study, extensive research, and remarkable experience in treating diseases of the heart, stomach and nerves, which often complicate each case.

The Treatments are prepared expressly for each patient, as the result is very much more certain and satisfactory.

Few physicians have such confidence in their remedies. And there is no reason why all afflicted persons should not avail themselves of this liberal offer. No death comes more suddenly than that from heart disease. Thousands die unnecessarily each year because most physicians do not understand these cases.

Mrs. Frank Smith of Chicago was cured of heart dropsy after five leading physicians had given her up. Mr. Keister of Chicago was cured after failure of ten able physicians.

A thousand references to, and testimonials from Bishops, Clergymen, Bankers, Farmers and their wives will be sent free on request. These include many who have been cured after from five to twenty or more physicians and professors had pronounced them "incurable." Among them are H. A. Groce, 504 Mountain St., Elgin, Ill.; Mrs. Sophie Snowberg, No. 282 21st Ave., S. Minneapolis, Minn.; Mrs. A. P. Colburn, Blessing, Ia.; Mrs. M. B. Morelan, Rogers, O., the presidents of two medical colleges, etc.

Send at once to Franklin Miles, M. D., LL. B., 209 State St., Chicago, Ill., for free treatment before it is too late, and please mention this paper.

BETTER AND BIGGER THAN EVER.

The Great St. Louis Fair Will Be Held the Week Beginning October 7.

It is the purpose of the new management of the St. Louis Fair Association to make the Great St. Louis Fair this year more entertaining and more generally instructive than any Fair ever before held in the United States.

To this end there will be a vast number of high class special attractions for the arena, which will be seen by patrons of the Fair without extra cost. The new blood in the Association realizes that the Fair is largely didatic in its purposes, and it is the purpose to combine instruction with amusement in order that the greatest possible number of people may be benefited.

President C. A. Tilles and Secretary Hachmeister have strenuously endeavored to get a number of attractions for the arena that would serve to draw the general public, and at the same time attract attention to the agricultural and live stock displays. They appear to have been successful. The arena program this year is diversified, and calculated to interest the dweller in the city as well as the man who "knows what's what," in the matter of fine stock and aristocratic horses.

The Lockhart troupe of trained elephants is one of the special arena attractions. These remarkable beasts will go through their wonderful performance in the arena every day, and will be kept on exhibition in a tent on the grounds when not in the ring.

The Faust Family, Australian athletes of international renown, are another arena attraction, and the Flying Banvards, the most daring of aerial acrobats, are yet another.

There will be a series of automobile races in which every variety of horseless carriage will be given a chance to compete.

There will be athletic games under the supervision of John J. O'Connor, chairman of the Western Association, Amateur Athletic Union. Some of the most noted amateur athletes in the world will take part in these games, and they are being discussed in athletic circles all over the world.

There will be six high class running races on the mile track at the Fair Grounds every day during the meeting.

In short, the Great St. Louis Fair of 1901 will be long remembered as better than any of its predecessors.

KANSAS WHEAT IN B. C.—Mr. Alex. McDonald, of the Goodlander Milling Co., of Fort Scott, sends to the Kansas Board of Agriculture a sample of very fine wheat grown at Armstrong, British Columbia, Northwest Territory. Last year the Goodlander Company filled an order from British Columbia for 40 bushels of hard Kansas seed wheat, which they procured in Rice county, and the Canadian purchaser now writes that the grain produced from this seed yielded 70 bushels per acre, testing very nearly 67 pounds per bushel, and having a very large and attractive berry. Mr. McDonald says the seed shipped north had a much smaller berry, and tested about 60 pounds per bushel. This wheat, like the world-beating horse Cresceus, seems to be greatly indebted to a Kansas parentage.